

PUBLIC HEALTH



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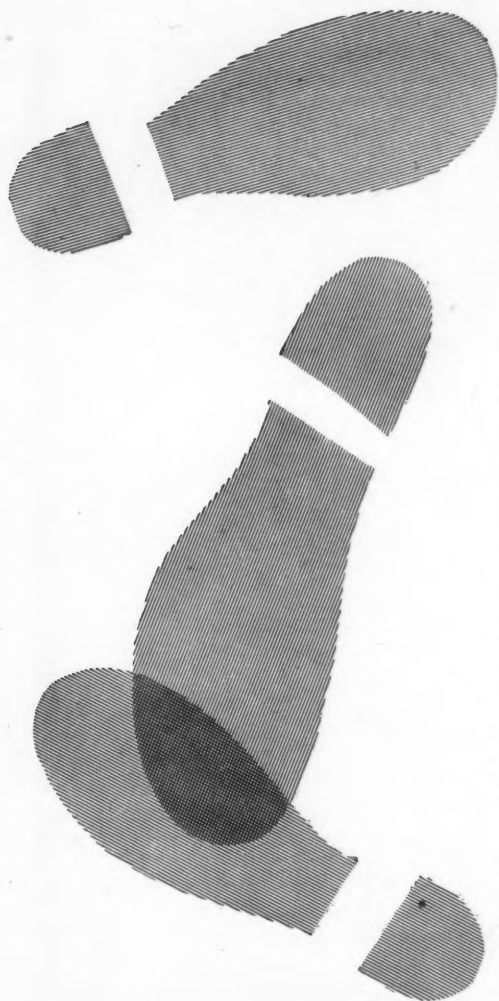
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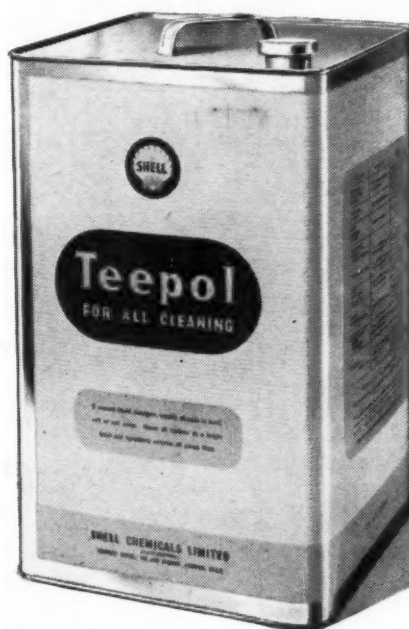


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EDITORIAL

The New Salaries Award

As we go to press for this issue, we have learned the terms of the Industrial Court's Award No. 2565, which is dated April 20th, 1955, and summarises the claim put forward by the Staff Side of the Medical Whitley Council Committee at the hearing on March 29th and 30th and the counter-arguments put forward by the Management Side. By the time these words appear our readers will have been able to study the actual award in the medical weeklies; so we propose here only to consider the general implications of the Court's decision and the future prospects. The outstanding feature of the new award is that the Court show, by the actual increases given, that they have accepted the Management Side's argument that public health medical officers are members of the local government service first and of the medical profession only incidentally. This is profoundly disappointing to all those who have the interests of public health and preventive medicine at heart and who wish to see the Public Health Service attracting a fair share of the best brains and abilities in the medical profession. In this material world too much esteem is no doubt attached to salary rates, and with the current depredations of the Inland Revenue earnings over £2,000 mean prestige rather than cash in the bank—but prestige within a profession is none the less important when recruitment to one branch or another is concerned. Clearly there will be no further purpose in carrying this case again to the Industrial Court and our hopes must now turn elsewhere. The British Medical Association, in accepting the proposal for the setting up of the Hamilton Committee, has shown itself very much aware of the unhealthy situation which arises when different sections of the profession vary too widely in the financial rewards open to them and we believe that this committee, now in being, may have suggestions to make towards the righting of the present situation. The trouble in medicine, unlike that in other walks of life, seems to be too many "differentials" rather than too few.

Meantime we must be thankful for such mercies as have been granted. Entrants to public health will now begin on a scale which is nearly double that of the Ashwith Memorandum, and in that respect are rather better placed than the senior members. Nor would we like any of our remarks to be construed as derogatory to the other professional officers in local government, but the nationalisa-

tion of medicine has put our profession into a different atmosphere, and we are perturbed lest the Public Health Service, with a hundred years of service behind it, may not deteriorate if its relationship with other branches in medicine is not clearly re-established.

The terms of the award were announced, no doubt by pure coincidence, in the middle of the R.S.I. Health Congress at Bournemouth, where the great majority of British medical officers of health and many other local authority medical officers had heard some exceptionally inspiring presidential addresses and discussions about the expanding horizon of preventive medicine and opportunities to be seized for exploring hitherto untouched aspects of community health. It is the irony of public health that the more its economic and social value to the nation is recognised, the less does the recognition take the form of higher remuneration to its practitioners.

A sense of vocation has always been one of the motives which has brought young doctors into public health work, for the rewards have always been less than those of other branches. But we doubt whether many M.O.s.H. today will advise their sons who turn to medicine to make a career in public health. One reason is finance and the other the confused state of public health administration. It will be to the benefit of both the country and the medical profession to get these matters put right.

In the last sentence of our review of "Fluoridation as a Public Health Measure (see April issue, page 108) the word "fluoridation," which occurs twice, should in both instances have read "fluoride ion."

Members of the Metropolitan and Home Counties Branches of the Society invited to attend the Centenary celebration of Dr. John Snow's "On the Mode of Communication of Cholera" arranged by the Section of Epidemiology and Preventive Medicine of the Royal Society of Medicine. This will be held at the London School of Hygiene and Tropical Medicine, on Tuesday, May 17th, From 3.30 to 4.30 an exhibition prepared by students will be on view in the Museum, and at 5.30 p.m. in the Lecture Theatre, Prof. A. Bradford Hill will give an appreciation of Snow and Prof. J. M. Mackintosh will speak on "The Man and His Times." A dinner will follow, for which there is a limit of 100. Applications should be made to the Hon. Secretary of the Section, Dr. D. D. Reid, London School of Hygiene.

THE HEALTH OF THE COUNTRYMAN*

By KATHLEEN M. HARDING, M.D., D.P.H.,
District Medical Officer of Health and Assistant County
Medical Officer, East Suffolk

It has always been a tradition that living in the country is healthier than living in the town. Indeed, some people tend to become quite lyrical about the delights of country life. As one writer expresses it: "Agriculture is the oldest, healthiest and most natural of enjoyments. The husbandman in general enjoys pure air, and varied and moderate exercise . . . his diet is always abundant and nutritious and his habits much more temperate than those of the manufacturing classes." But times have changed. With the development and control of environmental hygiene we no longer regard the townsman "as one who long in populous city pent, where houses thick and sewers annoy the air." Towns have become healthier places than they were in former years. Perhaps the health record of town-dwellers is now better than that of countrymen. The people living in towns no longer suffer from polluted water, lack of sanitation and so on. In general the artisan and labouring classes in towns have higher wages than their fellows in rural areas, and so they may be presumed to have a higher standard of living. On the other hand the countryman does not have to contend with atmospheric pollution. It is true that he is often housed in a cottage that is not in good repair, but he is not generally overcrowded. Out of doors his children have space in which to play and an endless variety of interesting things to occupy them in their spare time. There is less noise to keep them awake at night.

I thought, therefore, that it might be both interesting and instructive to attempt to make some assessment of the health of countrymen as compared with townspeople. The figures that I shall quote are taken from reports of Medical Officers of Health, and of the Ministry of Health, and publications of the General Register Office.

In order to live in the country it is first necessary to be born. It is fairly well known that the standardised birth rate in rural areas is higher (16.52) than in urban areas, where it varies from 15.9 to 14.4. The stillbirth rate (per 1,000 live- and stillbirths) is lowest in rural areas and conurbations (22). It is slightly higher in urban areas (23 and 24). The infant mortality rate is lowest in the rural areas (26). It is slightly higher in conurbations (27), and highest of all in the other urban areas (28 and 29). These figures are for the whole of England and Wales and are taken from the Registrar-General's Statistical Review for 1952. It would appear from these figures that rural mothers have, in proportion to their numbers, more children than urban mothers; that the country baby's chances of being stillborn are no worse than those of the town baby's; and that his chances of survival during the first year of life are slightly better than those of the town baby. With regard to the risk of childbirth to the mother the maternal mortality rates are higher in the rural areas (0.73) than in the urban areas and conurbations (0.69).

It is difficult to obtain many details of the health of pre-school children. The number of deaths at different age-groups from different causes can be obtained, but in the absence of information on the number of child population in each age-group it is impossible to make any comparison between children living in town and country.

Statistics about school children are available in the reports of Principal School Medical Officers. It is difficult to obtain very accurate information from these figures. Different education authorities examine a different percentage of their school population each year, and different medical officers have different standards. For example, with regard to the defect "otitis media" one medical officer may examine every pupil's ears with an auroscope as a routine; another may only examine the ears if the parent says the child has

had ear trouble. Another may specifically ask the parent about previous ear trouble and so obtain a history that would otherwise not have been discovered. Figures are not given separately in these reports for urban and rural areas, and it was necessary when selecting counties from which to study statistics to choose those having a predominantly rural population. These counties are not so numerous as might be supposed. When selecting county boroughs, from which the urban figures were taken, I tried to choose those with a varied socio-economic structure which were not heavily industrialised. It was hoped in this way to overcome as much as possible the introduction of factors that were not relevant to this inquiry.

The total number of children, in each authority, who underwent routine examination during the year 1952 was obtained and the total number of children found to require observation or treatment for each defect was noted. The incidence per 1,000 children examined was then calculated for each defect. As I have already stated this method of comparison is open to many errors, but it may perhaps give us an indication of the varying incidence of some defects amongst town and country children. Four rural counties, A, B, C, D (Table I), and four county boroughs, E, F, G, H (Table II), have provided the figures and I hope that

TABLE I

	County A	County B	County C	County D
Percentage of school population examined in year	35 per cent.	40 per cent.	43 per cent.	30 per cent.
Defect:				
Skin	13.8	20.9	10.2	20.8
Vision	96.5	85.9	103.3	114.1
Squint	16.1	19.4	15.4	22.01
Eyes—other	9.8	10.1	15.1	10.1
Hearing	10.4	7.3	12.3	9.7
Otitis media	9.95	8.7	8.24	7.8
Ears—other	8.4	4.5	5.4	7.2
Nose and throat	94.5	110.4	115.1	114.4
Speech	10.6	17.3	10.4	8.3
Cervical glands	23.9	48.2	51.5	17.9
Heart and circulation	12.3	12.2	26.3	12.7
Lungs	20.34	27.8	32.1	53.2
Dev. hernia	1.65	6.46	7.2	1.7
Dev.—other	6.1	19.5	18.5	8.5
Posture	29.5	11.9	29.3	5.9
Flat foot	23.5	17.9	35.2	35.3
Epilepsy	2.3	2.2	2.3	1.4
C.N.S.—other	2.4	7.5	9.6	3.5
Psycholog. dev.	12.4	17.1	9.4	9.5
„ stab.	2.3	12.4	13.5	7.9
Other	24.1	16.1	38.5	47.4

they will interest you. I shall comment on some of the figures for country children and suggest some reasons why they differ from those of the towns.

Vision.—The incidence of visual defect is substantially higher in two of the rural counties whilst the remaining two counties have figures which are similar to those of the town with the highest incidence. There may be some degree of error in these figures, for you all know that everyone has a different way of conducting eye examinations. Some omit all entrants. Others do the first eye examination when the child is eight years old, and others try at six years, and so on. However, it does seem that country children have poorer eyesight than town children. Why is this? Is it due to lack of efficient artificial lighting in home or school? Is there possibly a nutritional defect? Is there a genetic cause?

Squint.—In two of the counties the children have a higher incidence of squint than the town children. Is this because of their failure to obtain treatment early enough in life before they ever come to school? Or is there a longer delay, possibly from the failure of the parent to consult the family

* Presidential Address to the East Anglian Branch, Society of M.O.H., December 4th, 1954.

TABLE II

Percentage of school population examined in year	Town E	Town F	Town G	Town H
	55 per cent.	30 per cent.	28 per cent.	38 per cent.
Defect:				
Skin	22.3	36.9	15.85	3.4
Vision	57.4	99.9	66.4	39.8
Squint	13.4	17.9	16.8	5.44
Eyes—other	12.2	6.5	5.1	2.2
Hearing	5.9	11.2	4.5	5.1
Otitis media	4.2	8.1	7.6	2
Ears—other	1.9	7.6	30.5	1.35
Nose and throat	68.1	110.4	81.2	63.4
Speech	8.1	3.9	4.3	3.8
Cervical glands	13.8	34.4	2.1	1.6
Heart and circulation	14.8	15.6	5.9	11.7
Lungs	13.7	38.6	23.5	15.8
Dev. hernia	8.8	2.9	5.5	0.7
Dev.—other	15.4	10.7	2.8	2.5
Posture	14.1	19.9	3.3	27.7
Flat foot	8.36	24.8	7.4	20.7
Epilepsy	3.14	0.4	2.2	0.7
C.N.S.—other	14.8	1.56	3.3	3.2
Psycholog. dev.	11.2	4.4	0.9	1.2
" stab.	2.2	10.7	0.9	1.6
Other	78.2	11.7	6.9	11.9

doctor or the doctor to send them to an eye specialist, after they become school children than there is with town children? This delay, especially in the pre-school child, is a serious one for we know that a neglected squint often results in deterioration, and perhaps later loss of vision, in one eye.

Hearing.—There is a higher incidence of hearing defect in the country children. It is interesting to note that County C, the county with the highest incidence, is the only one of the eight authorities using a group audiometer for routine testing for deafness.

Otitis Media.—Three of the counties had a higher incidence. Some of these cases probably result in country parents being reluctant, with no doctor near at hand, to call in medical aid when a child complains of earache. So an acute case may not be treated until it has become established. The sufferer from chronic otitis is also at a disadvantage in the country. He cannot attend the minor ailment clinic or the hospital out-patients for daily dressings. Also, is there any connection between the higher incidence of nose and throat defects found in country children, and otitis?

Nose and Throat.—It will be seen that, on the whole, the country children have more defects. No doubt the majority of these figures refer to tonsils and adenoids. Many of them are enlarged and are being faithfully watched by the school health service year by year. Are we to infer from these figures that the country children manage to hang on to their enlarged tonsils and so come up as hardy annuals for each routine medical inspection, whereas a proportion of the town children have theirs removed and so are struck off the list?

Speech.—Here again the country children are leading the field. Do town children obtain treatment at an earlier age? Are there many more cases due to undiagnosed deafness? Is it associated with the higher incidence of educational subnormality in country children?

Cervical Glands.—The incidence of this defect tends to be higher in country children. Some cases are associated with enlarged tonsils. Others are caused by extensive dental caries. Others are caused by the tubercle bacillus.

Lungs.—One county has a much higher incidence of defects than the four towns.

Flat Feet.—More country children suffer from this condition.

Psychological Development.—The higher incidence of defect amongst country children is in accordance with the

popularly held view that all the brainy people have left the country in order to make their fortunes in the towns. W. G. Emmett, in a recent survey by means of the Moray House tests, found that children from urban areas in East Suffolk has a mean intelligence quotient 2.75 points higher than children in the rural areas. Another factor is that whereas most county boroughs have their own E.S.N. schools to which many backward children are transferred, country children have to go to residential E.S.N. schools. It is not an easy matter to obtain vacancies in such schools, and many parents, reluctant for their children to leave home, refuse to let them go. So many of the backward children remain in ordinary schools in the country.

From this examination of School Health Service records it does appear that children in the country have more defects, in many instances, than those living in towns. I suggest that this is partly caused by the greater inconvenience to which the country parent is put in order to obtain medical aid for the child and also by his greater reluctance to obtain it.

Notifiable Infectious Diseases

Comparison of notification rates of notifiable infectious diseases provides some interesting information, but because notification is not complete in some areas it is not always very accurate information. However, poliomyelitis is usually notified and in 1950 the notification rate (per 100,000 living) was highest in rural areas (21), was 18 in the conurbations, and ranged from 19 to 13 in the other urban areas. The number of deaths per 1,000 notifications was highest in the urban areas with populations between 50,000 and 100,000, namely 12, next highest in rural areas (11), and ranged from eight to ten in other urban areas.

Measles had most notifications in conurbations and urban areas (37 to 41 per 1,000 population). There were 32 notifications per 1,000 in rural areas. The deaths per 1,000 notifications were highest in the urban areas (0.55 to 0.97) and lowest in the rural areas (0.54). It is probable that a number of rural cases were not notified.

Whooping Cough.—The smallest notification rate was in the small urban areas, the next lowest in the rural areas and the highest from the conurbations. The deaths per 1,000 notifications were substantially lower in the rural areas.

Food Poisoning.—This condition appeared to be more prevalent in rural areas where there were 25 notifications per 100,000 population as opposed to the highest urban rate which was 18. The countryman has to store food for a long period as he is often far from shops. It is usually delivered to his home in an unventilated van that has been travelling round the country all day. Country cottages have poor facilities for storing food and cooking is often done on an old-fashioned coal range which makes the kitchen and adjoining larder very hot in summer. Food stored at home may have been contaminated by rats and mice; and the cottager may keep ducks and eat their eggs.

Dysentery was notified least of all in rural areas (18 per 100,000) as compared with the lowest urban rate of 30. The deaths per 1,000 notifications were highest in the rural areas (7) and ranged from six to two in urban areas.

Diphtheria was most notified in urban areas (9.4 to 5.4 per 100,000) at ages 0-14 and was only 4.3 in rural areas. The death rate per 1,000 notifications was lowest in the rural areas (38) compared with 42 to 58 in urban areas.

Tuberculosis is one of the most serious of the infectious diseases. The death rate in the rural areas was considerably lower (227 per million population) than the average death rate for the urban areas and conurbations (341 per million). These figures are in accordance with the experience of the Mass Radiography Units. An open case of tuberculosis (apart from his own family circle) has more chance of spreading infection in a crowded city than in the more sparsely populated countryside. It is probable that many of the people who die each year from non-pulmonary tuberculosis have been infected with the human and not the bovine type of bacillus.

Special Health Hazards of Agriculture

Apart from statistics about notifiable infectious disease it has been difficult to obtain any information about morbidity in rural populations. The Department of Health for Scotland in a report (1937) showed that the incidence of sickness in male agricultural workers was not unduly high. Women agricultural workers, however, tied with domestic workers in having the highest rate of sickness in any occupational group. Keatinge (1948) considered some of the diseases to which farm workers may be especially prone. Toxic hazards may occur from the use of fumigants and other insecticides, selective weedkillers and artificial fertilisers; oil dermatitis (from care of machinery), sheep dips, and tar compounds used for treating wood. The farm worker may also be more liable to attack from certain diseases of animals such as abortus fever, glanders, anthrax, tuberculosis, ringworm and Weil's disease. He may inhale fungi and contract Farmer's Lung. He may become affected by allergic conditions. He is exposed to the weather when at work and may have a greater incidence of rheumatism. Accidents on the farm seldom get reported, but I well remember doing a locum in a country practice at harvest time when the number of farm workers who got themselves kicked by enraged animals, dropped drain pipes on their toes, fell in front of the hay rake or some other dangerous implement, or cut off their fingers in the circular saw, had to be seen to be believed. Then there are accidents with firearms. In the United States they have thought it worth while to publish a special booklet on the prevention of accidents on the farm and to run a "Farm Safety Week." In some rural areas in this country St. John's Ambulance hold special first-aid courses for farm workers and talks are also given to Young Farmers' Clubs.

Death Rates

In the absence of any more precise information on morbidity we must pass on to a consideration of death rates.

The standardised death rate is lowest in rural areas (10.07); it is next lowest in urban areas with a population of less than 50,000 (11.21). It climbs progressively higher as the population density increases. In the Statistical Review for 1950 the Registrar-General comments on the regional differences in death rates for some diseases. There is a well-known association between urbanisation and cancer which is marked in the case of carcinoma of the lung. Pneumonia and bronchitis have higher death rates in urban areas.

Arteriosclerotic heart disease, including coronary disease, had a higher death rate in urban areas (1.43) than rural areas (1.25). Both these figures are per 1,000 population. Hypertension, with and without heart disease, also had a higher death rate in urban areas (0.43) than in rural areas (0.37). There was no significant difference in the death rates for gastric and duodenal ulcer in town and country. The mortality from road accidents is higher in the country. The death rate from this cause was 0.08 in urban areas and 0.13 in rural areas. Other accidents had a death rate of 0.25 in rural areas and 0.22 in urban areas. Deaths from suicide were higher in urban areas (0.1 per 1,000) than in rural areas (0.08). There does not appear to be any significant difference in the number of deaths in town and country from other causes.

The countryman, then, if he can avoid death by accident or road accident has a better chance of survival than the townsman, but we do not know, in the absence of morbidity statistics, whether his health during his life is better or worse than that of the townsman.

Urban and Rural Health Services

The last part of this survey is concerned with a comparison of some of the services provided by local health authorities in town and country. Are country people at a disadvantage because of their isolated environment?

Almost all the information for this section has been obtained from the Annual Reports of Medical Officers of Health. Seven rural counties and five county boroughs comprised the sample. This is not an ideal way of gathering information, for details of some of the services are not as complete as one would wish, and also schemes on paper may work out differently in actual practice. However, the information may give an indication of what is happening.

Voluntary Organisations and Service.—There are two aspects of voluntary work: (1) The voluntary organisations for the care of unmarried mothers, the blind, old people, ambulance services and so on to which the local authority makes an annual grant. (2) Voluntary workers who help at clinics, visit the aged and carry out other duties. They may work alone or in bands such as the W.V.S. or in the former Infant Welfare Associations. The existence and form of voluntary service seem not to differ in town and country. In any district where there has been a tradition of voluntary service, there voluntary service will flourish. Where there is no tradition there is usually little or no voluntary service.

Expectant Mothers.—Ante-natal clinics seem to be moribund in those centres of population in rural counties where they formerly flourished. In towns those run in connection with local hospitals and for municipal midwives continue to thrive. It is useful to have the expectant mothers gathered together for relaxation exercises, mothercraft classes and so on. Also mothers attending these clinics usually have a blood test for WR Kahn and Rh factor. Mothercraft classes are held in some rural counties, and talks on similar subjects are given in Women's Institutes in some places.

Infant Welfare Centres.—These remain, despite the gloomy prognostications of some paediatricians and theorists in social medicine, very popular and, I think, important institutions. They are numerous in urban areas and it is rare to find a neighbourhood which is not served by a clinic. In the country there must inevitably be many mothers who have no clinic near enough for them to attend. Many country mothers undertake a journey on foot of several miles in order to take their children to a clinic. In towns mothers make only a short stay at the clinic. After they have had the baby weighed, seen the health visitor or doctor, and perhaps collected some welfare foods, they depart. This short stay does not mean that they are any less keen to seek advice from the clinic. In the country the clinic is a social occasion. The mothers settle down and spend the afternoon there. This is a very good thing, especially for mothers who live in isolated places. Not only do they get a chance to talk to other mothers, compare notes, and to find out that other people's children are just as peculiar as their own; but what is equally important their children, who may not have any siblings or young neighbours, are able to meet and to mix with other children. Unlike those in towns country welfare centres usually meet only once a month and it is therefore impossible to deal very much with specific feeding problems, but one can advise the Health Visitor on a future course of action for any particular case. The most valuable contributions that the country clinic can make, apart from the social ones already mentioned, are educational, and discussions with individual mothers on the various problems that they encounter in bringing up their children.

I consider that Infant Welfare Centres in the country are a most valuable part of the Health Service and that every effort should be made to keep them going and to open new ones as required. What of the many mothers who cannot reach a clinic? Some authorities have started mobile clinics. In whatever way this problem is met the country health visitor will require to make more visits and she should therefore have a smaller case load than her colleague in the town.

Diphtheria Immunisation.—As might be expected the level of immunisation is higher in the county boroughs (75 per cent. of the child population) than in the rural counties (51.6 per cent.). However, these figures may not be reliable. Some country mothers seem to have a deep rooted objection

to immunisation and nothing will persuade them to have their children protected. A few mothers living in out-of-the-way places and having large families of pre-school children are unable to make a long journey to a doctor's surgery for immunisation. Many country doctors will visit to immunise the children, but some refuse to do so.

Vaccination.—Country mothers seem keen to have their children vaccinated and most inquire spontaneously about it. Perhaps they are less distrustful about this than diphtheria immunisation because it is not a new thing, but something they have known about for years.

Ambulances.—In the rural counties there is a constantly reiterating tale of rising costs and of attempts to economise and to prevent abuse. The country dweller is undoubtedly at a disadvantage when he has to visit a specialist or to attend for out-patient treatment or investigations. If the journey is long or awkward or expensive he may put it off until it is too late, or forgo a course of physiotherapy that would have made him 100 per cent. fit again. It would seem to be more expensive to bring the physiotherapist to the patient and short-stay hostels near the out-patient department would also be very costly.

Home Helps.—Local authorities are constantly being exhorted to expand their Home Help Service. In this way, we are told, more domiciliary confinements can take place, patients can be discharged from hospital after a shorter stay, and more old people can remain in their own homes. All this will result in a higher bed turnover, save staff and cut down expense. Unfortunately, most of the people who require home helps cannot afford to pay for them, or cannot make more than token payments so that we are faced with the situation in which the more the Local Authority enables the Regional Hospital Boards to save money, the more it becomes out of pocket, and the more the rates will go up. In areas with low populations this is hard to bear.

It is difficult to obtain details about the precise number of home helps available in town and country. On paper the aggregate of full-time home helps was 26.1 per 100,000 population in five county boroughs and 43 in seven rural counties.

Health Visitors.—Owing to lack of detailed population figures it has not been possible to compare the case load of health visitors in town and country. Instead the number of health visitors per 100,000 population has been calculated. Only persons holding the H.V.'s certificate have been included. The average number per 100,000 population was the same in town and country, namely 12.73. In order to compensate for time taken up by travelling and also to give more attention to families in isolated places it seems desirable for country health visitors to have smaller case loads. Another promising development is the scheme of combining the duties of District Nurse and Health Visitor.

Health Education.—There appear to be great potentialities for health education in the country. People, although fatalistic and prejudiced, are more willing to sit and listen. There are not so many distractions to compete with. Some rural counties have started mothers' clubs, and others give talks to Women's Institutes, Young Farmers' Clubs and other organisations. Many have film projectors. Most of these organisations have evening meetings which means that the member of the health department staff who is giving the talk is faced with a long journey and has to put in an evening's overtime. This probably makes the staff less enthusiastic than they might otherwise be over this kind of work. However, it should be possible by some adjustment of duties to put this matter right.

Welfare of the Aged.—Some of the reports mention welfare schemes for the aged. Two of the rural counties make mention of extensive activities such as old people's clubs, committees and old people's friends. Three others mentioned the existence of hostels and residential accommodation. One county borough had a very full account of activities. Others mentioned hostels. It must be realised that different authorities organise their welfare services in different ways and although in some cases they are associated

with the Health Department this is not always so. Lack of information does not mean that facilities are non-existent. Welfare of the aged must of necessity become more important as time goes on. The health of the aged countryman is very much our concern, and he requires social activities and material helps by the way just as much as the townsman. Our success in providing these things for him while he is still active and mentally agile will do much to prevent him getting into that state of self neglect and invertedness of mind which is so difficult to overcome in the elderly.

Mental Health.—The problem of finding institutional accommodation for mentally defective persons does not vary much in town and country. Both are served by the same local regional hospital board. Many reports told of serious lack of accommodation and the distress caused to parents who have to keep watch over low-grade defectives at home. One rural county had a waiting list of 150. Others had waiting lists of 51, 28, 18 and 8 respectively. The towns had waiting lists of 34, 34, 16 and 14. It is possible to give some training to children and adults living in towns, and to afford some respite to their parents, by the provision of occupation centres. In a rural community transport difficulties prevent the extensive use of occupation centres. Of six rural counties one had four occupation centres and one home teacher; another had four occupation centres only; another had one occupation centre. One had home teaching only. One had an occupation centre, fortnightly day classes and one home teacher. This scheme of day training classes at fortnightly intervals appears to be a most valuable provision for rural areas as it enables a larger area to be covered than would be the case if the centre met every day in the same place.

Conclusions

These are the few facts that I have gathered about the countryman and his health. What conclusions may be drawn from them?

I think we may say that the environment in the country is more healthy than that of the town, probably because of two things: absence of air pollution, and the slower tempo at which life is lived. Country people seem to live a more satisfying sort of life. I have no statistics to support this second contention. It is just an impression of my own and of people that I have met who have had experience of working with town and with country people.

With regard to environment then it is surely our task to try to reproduce the good things of the country in the town. To control as much as possible the pollution of the air, and to promote a more balanced mental outlook, to reduce the factors of stress and strain.

When we come to personal health services it seems, if the School Health Service figures are to be relied on, that the countryman is somewhat at a disadvantage. If it is difficult to get to a doctor or to obtain other services things may be left until it is too late. This is not meant to be a reflection on the country doctor who always does his best. It is something brought about by adverse circumstances such as lack of transport or isolation. Whilst we do not want to breed a race of neurotics in the country perhaps we could from time to time review the medical arrangements in our areas and see what we can do to make them more readily available when this is necessary. We could also keep a watchful eye on the agricultural industry, looking out for possible occupational diseases and noting their prevalence; and encouraging movements for the prevention of farm accidents.

The promotion of the countryman's health is, I feel, particularly our responsibility so I lay these facts before you for your further consideration.

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ACCIDENTS IN THE HOME *

By AMY JAGGER, M.D., D.P.H.

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It is the custom for Presidents of this Branch of the Society to give an address at the first meeting at which they preside. Some can describe interesting experiences they have had or experiments they have carried out. I have had no experiences in the field of medicine which would interest you nor have I any research to speak about; but while I was thinking of these things, I had a minor road accident and my mind being full of the two subjects—the accident and the President's address—I decided they should be combined and I would talk of accidents, not road accidents but accidents in the home, with special reference to their prevention.

It is a relief to concentrate on a small domestic problem when those of the world seem insoluble and nations prepare for war while statesmen travel hopefully from country to country and talk of peace. Soon they may fly faster than sound, their voices echoing emptily behind them.

After Dunkirk a residential school for educationally sub-normal girls was evacuated from a city in the Midlands to a camp on the edge of an aerodrome in Glamorgan. It was a hutted camp and could have been mistaken for an army camp even from the ground. I was sent to refract the children with defective vision and prescribe glasses for them. There were frequent air raid warnings and we all had to run out and stand under the hedge which did not protect us from the rain while German planes presumably flew overhead. It seemed a futile occupation. But because it assumed that the children would live and that the spectacles would be provided for them, it was as good for the morale of all concerned as Sir Winston Churchill's famous speech made at the same time. In the same way, when at least half the world is terrified of what the newest weapons of war may accomplish it will be good for us now to assume that homes will continue and that accidents in them can be prevented.

There are no records of the actual number of accidents in the home occurring in any year in this country, or even of the number of accidents treated in hospital, but accidents are now the fifth cause of death and in children between the ages of one and five years accidents in the home are the third cause of death.

From 1940 to 1949 over 60,000 people died from accidents in the home, compared with 48,000 in road accidents! And home is your safe place! With over 1,000 more deaths from accidents there every year than in the road.

Looked at economically, it has been estimated that in 1949 in one hospital serving a population of 13,000 in a congested urban area the cost of treating accident cases was £52,000. The cost to the whole country in hospital treatment alone is about £4,000,000 to £5,000,000 per year. With modern methods of treatment many seriously injured now survive but often in such a condition that they are unable to earn their living.

There are very accurate and detailed records of road accidents because of the insurance money involved. Accidents in the home do not usually raise problems of this kind and there are very rarely any legal actions or enquiries unless a coroner's inquest is needed. The slightest road accident is dramatic and causes a sensation in the street where it occurs, but people can be very seriously injured in their own homes without anyone except those in the house being aware of it.

The age groups most prone to accidents in the home are the very young and those over 60 years old.

The greatest number of fatal injuries are due to people falling down: it is interesting to note that more falls occur "on the same level" than in going up or down stairs. About twice as many women die from this cause as men. Fractured femurs and Colles' fractures have always been more common in women than in men. This difference in

incidence may be due partly to women's clothing, high heels, heels catching in hems of skirts, and also to the fact that women tend to move about the house more than men, often carrying trays.

To reduce the number of falls it is necessary to make people consider their homes from this angle. Most houses have a hazard well known to the family—they say "Some-day somebody will break their neck on those stairs" or "There should be a light in that corner" or "When is somebody going to fix that carpet?" But it is not until the anticipated accident has happened that something is done. The same people who will advocate the removal of a building to increase road safety will never think of moving a piece of furniture in their own home to increase the safety of their family.

The highly polished wooden floor is a menace. Hospitals and clinics are often very bad examples of this. I fell and fractured three metacarpals when a resident. A midwife in one of my clinics fell and fractured her femur. She had to retire prematurely and after many operations is a permanent cripple. Eight weeks ago a health visitor fell on polished linoleum, while carrying a child with infantile paralysis; in saving the child she was unable to help herself and fractured her superior maxilla.

For those who can afford it fitted carpets and rubber floor covering in kitchen and bathroom are the ideal in homes where there are elderly people. The soles of shoes of old people who never go out become smooth and polished and should be roughened regularly. The present tendency to keep old people on their feet increases the number liable to accident. It is often a relief to those who have to look after paralysed old persons when they no longer get up but are safe in bed.

Every year there are about 600 deaths in the home from burns and scalds and 12,000 seriously injured. The cost of in-patient treatment alone is about £1,000,000. This is not a new problem. Mr. Brontë had a great dread of fire. In 1844 he wrote to the *Leeds Mercury* "I have been at Haworth for more than 20 years and during that long period of time so far as I can remember I have performed the funeral service over 90 to 100 children who were burnt to death in consequence of their clothes having taken fire and on enquiry I have found that the poor sufferers had been clothed in either cotton or linen." He insisted on all members of his family always wearing wool or silk clothing. "Indeed for anyone to wear any other fabric was almost to forfeit his respect" said Mrs. Gaskell. He would not allow any curtains to be hung in the parsonage. Unfortunately in spite of his care all his six children were to die of tuberculosis.

Mr. Brontë's problem would have been much greater today. Fabrics are rarely what they seem and synthetic materials have replaced or been blended with the natural fibres for various reasons. Contrary to general belief these synthetic substances may be inflammable, sometimes very much so. I have heard of a fabric, very beautiful to look at, which bursts into flame spontaneously. It is said to be too expensive to make materials fire proof except in special cases. Very beautiful fabrics are made of glass, indistinguishable from silks and satins. They will not catch fire and are used extensively on the stage. They are suitable for curtains provided that when they are washed they are treated like a sheet of glass, they cannot be folded or screwed up as some of the glass fibres will break, making a rough mark on the material. Similarly they are not suitable for clothing as the edges will abrade the skin.

Upholstered furniture which will smoulder for a long time has been a frequent cause of fires.

In Mr. Brontë's time the agents producing the fire were the candle, the paraffin lamp or the open fire. They could only produce fires. Now we have coal gas which can also poison, and electricity which can also shock. We also have the cigarette. There have been enough tragedies recently to remind us of the need for educating people in the use of these dangerous everyday things and the precautions that

* Presidential Address to the Welsh Branch, Society of M.O.H.

ought to be taken in fitting and using the various appliances. The effect of the Heating Appliances (Fireguards) Act 1952 will not be felt for many years, as it is only on new fires that these guards have to be fixed. The Act only concerns gas and electric fires. There is no compulsion to have a guard in front of a coal fire. In a survey in which over 1,000 houses were visited, only 36% with children under six were using a fireguard. Only 7% of houses with people over seventy had guards. A good fireguard may cost £2. Many local authorities have schemes for hiring out guards for a small weekly sum.

More care should be taken in the reconstruction of old houses. Often a new fireplace is fitted and the space at the back filled with any rubbish, which may catch fire. A friend of mine noticed smoke coming from the side of her fireplace one mid-day. There had been no fire in the grate since the previous night. Her baby slept in that room alone. The firemen found a large fire behind the grate when they pulled it out and told her this was a common occurrence. Some new houses built by local authorities have a fire in the sitting room with the chimney going up through the centre of the house so that heat is not lost on an outside wall. Care must be taken in constructing this flue. I know of two such houses where bedroom furniture has been destroyed through fire starting in the chimney. All the neighbours now know the risk and that they cannot have large fires in the grate for long periods.

The possibility of worn electric wires starting fires is well known but little heeded, and major electrical alterations are often entrusted to amateurs. I was told of a certified mental defective that he was marvellous with electricity and did all the neighbours' electrical repairs.

Many scalds are due to pans being knocked off the top of gas stoves. If all the burners are in use at the same time, as in cooking a family dinner, the pan handles must project beyond the edge of the gas stove. If they do not they get very hot. In Denmark they appear not to use gas cookers such as we have here: they have a metal-topped table with a number of movable gas rings on it, which can be adjusted so that there is plenty of space between the pans and there is room to stand the pans on the table when they are taken off the rings. The oven is a separate box at table height. The arrangement takes up more room and is not so nice to look at as our gas cooker but it is easier and safer to work with. There is no danger of pans being knocked over so that their contents are spilled over anyone standing near.

Hot water appliances should be regulated so that they cannot produce water that will scald. When one considers the difficulty of cooking on an ordinary sitting room grate by the mother of a family living in one or two rooms, one is not surprised that fish and chips and food from tins form the standard meals. It is tempting Providence to heat pans and kettles on such a grate with small children about. It requires a very clever person to manage under such conditions but usually it is the duller ones who have to do so.

In schools usually the most expensive modern fittings are put into the rooms where girls learn housework. It is easy to learn to use these. It would be better to concentrate on teaching them how to manage with the minimum and to improvise and work in conditions which they may have in their own homes.

Between 400 and 500 persons die each year from accidental poisoning with coal gas, most of them in their own homes and two-thirds of them over 60 years of age. The chief causes are partly turned off gas taps, so that the flame goes out, poor ventilation, blocked flues and worn out apparatus. The danger of using a gas fire without adequate ventilation is often not appreciated. Many rooms are now built without fireplaces and the occupants frequently block the wall ventilator. Gas fires should not be used in such rooms. Last winter two women and four children were found unconscious and only two recovered. They were in a room where the curtains had been drawn and the gas fire put on the mantelpiece out of the way of the children.

Gas taps should not be so loose they can be turned on inadvertently. Gas and electricity authorities will send an inspector to test the appliances in any house on request, but those who are most doubtful about their equipment will not ask for this to be done as they are fearful of the expense that may be incurred as a result.

Drugs cause the next greatest number of deaths from poisoning and most, if not all, accidents of this kind could be avoided if medicine, cleaning materials and other dangerous substances were kept in a safe place where children could not get them and adults would have to be wide awake and alert to get them. So many children have been poisoned by eating tablets such as those containing ferrous sulphate that it was considered recently that medicine should not be dispensed in this form, so easily mistaken by children for sweets. But the public has got used to its sugar-coated pill. Gone are the days of the doctor's "good bottle of medicine" apparently mixed by his own hand with that little extra added for "the pain in my back" or "this cough." It has been succeeded by the tablet from the chemist often demanded by the patient. The bottle of medicine could be shown to the family and visitors, held up to the light, shaken, smelt and even tasted and everyone could guess its composition. Some older people still pathetically exhibit their tablets but they vary little in appearance and nothing interesting can be done with them except count them. I think doctors have thrown away a very valuable weapon in the psychological treatment of their patients and it is perhaps significant that homeopathy is increasing. However, we might as well try to stop road accidents by stopping all traffic as stop poisoning accidents by trying to ban these tablets.

What must be done is make people aware of the danger and that they must protect their children from it. The death of a healthy normal child is a whole life thrown away. "Cut is the branch that might have grown full straight."

In all propaganda work we must remember that we live in an age of exaggeration. The ear is tuned to the loudspeaker, the eye to see in gorgeous Technicolor, no time can be spared to study details, and people boast of the number of things they can do at the same time. Therefore, it is no use hanging up a notice or giving people a leaflet and expecting them to read it. There must be a poster with an appropriate picture and a few simple words such as "Your medicine but his Poison. Keep medicines locked up." It occurs to me that drug and baby food manufacturers, who understand so well the art of advertising, might be persuaded to take part. They could combine it with an advertisement such as "Take A & B for your headache but don't let baby have it" or "Feed your baby on X food but lock your medicines away."

Accidental smothering in bed or cot is more likely to happen to a boy than a girl baby. No reason has been advanced for this. It is always claimed that women have more highly developed instincts and intuitions than men and rely on these rather than reasoning power, which they are said to lack. Perhaps this instinct tells the baby girl she is smothering and induces her to turn over.

Another "Mistletoe" Bough accident is happening in America where in 12 months 85 children have died through hiding in abandoned ice boxes and being unable to get out. Two bills are now before Congress making it illegal to supply any ice box or refrigerator "unless it is equipped with a latch which enables it to be opened from the inside." Twenty States have made it illegal to "abandon an ice box without first removing the door or latch." Perhaps we shall never reach the stage of throwing away ice boxes in this country but it is as well to be forewarned of the danger.

While I have been summarising the main types of home accident and their causes you will have thought of many more.

Preventive medicine has become increasingly directed to improving the resistance to disease rather than removing the causes, and medical officers and health visitors devote more and more of their time to immunising and vaccinating.

The number of cards and forms the health visitor has to fill in and index leaves her little time for the work for which she has been trained—e.g. it is necessary for the name and address of an expectant mother to be written out nine times the first time she attends the clinic if she wishes to take advantage of all the facilities available.

The liability to have an accident may be decreased by such things as wearing correct spectacles, hearing aid, using walking stick and wearing correct shoes but the public must also be educated so that they know the causes of accidents and can recognise defects in their own homes or habits and rectify them themselves. This is not easy work. As the Greek philosopher Heraclitus said "though reason is accessible to all, most people, it seems, incline to live according to their own notions."

Throughout nature the mother protects her young from danger and educates them for life. The mother of the child will be anxious to protect it from accident if the need is explained to her. This is particularly true of the expectant primipara whose mind is in a very receptive state. She is anxious to prepare for the coming baby and has time to plan her home so that it will be suitable for the child when it starts to walk. After the baby is born its growth is so rapid that the mother is so occupied that it may be on its feet and into the fire before the need for a fireguard has been realised. The mother could also condition herself to good habits so that, for example, she would never pour hot water into an empty bowl.

Women's organisations are particularly interested in the prevention of home accidents and would welcome advice on what to do before the accident, for they are the people most likely to have an accident.

The radio, television, newspapers, the cinema and women's magazines can all play their part in educating the public as they often do now in Road Safety Campaigns. Home Safety Committees are increasing in numbers, sponsored by the Royal Society for the Prevention of Accidents. General practitioners and consultants show great interest in this subject and a whole number of the *Practitioner* was recently devoted to Accident Prevention. The B.M.A. in its evidence to the Working Party of Health Visitors this year added to the subjects suggested as suitable for health education "the importance of education in accident prevention, with special reference to accidents in the home."

But prevention of disease is one of the chief responsibilities of the Medical Officer of Health and his staff. The ambulance service, the home nurse and the home help may all be needed for the treatment of a home accident and it is therefore even to the advantage of a health department itself to reduce the number of these accidents. Since I qualified many changes and improvements in the general health of the community have been achieved which then seemed impossible and compared with these the reduction of home accidents should be relatively simple.

William Harvey, said "Civilisation is simply a series of victories over nature" and so that we may leave this problem in its true perspective I would remind you that in 1,500 the expectation of life at birth was 30 years and Leonardo da Vinci was regarded as an old man when he died at the age of 69. The expectation of life at birth now is 70 years.

But Jeremy Taylor's remark is still true—

"To preserve a man alive in the midst of so many chances and hostilities is as great a miracle as to create him."

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THE EPIDEMIOLOGY OF HEALTH*

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The use of the expression "epidemiology of health" has still to be defended in this country although it has gained a somewhat wider currency in the U.S.A. I first saw it used in 1948 in a letter from the late Professor John Ryle who had, then, recently returned from a lecture tour in America under the auspices of the Rockefeller Foundation. The first reaction that this invoked was one of surprise and some concern that the word "epidemiology" should be juxtaposed to "health" and not, in the customary manner, to "disease." Greater familiarity with the idea, however, not only removed these misgivings but brought, in their place, a feeling of emancipation as by the removal of an intellectual strait-jacket and of a cold and invigorating wind blowing down the corridors of traditional practice.

The first difficulty is of an etymological nature. In 1952, Prof. A. G. Gardner, of Oxford, an authority on the meaning of words, protested against what he called the "...undoubted debauchery of a precise word 'epidemiology' which is being inflated by writers on social medicine and similar subjects to include the study of the frequency or incidence of diseases whether epidemic or not. The right and ... obvious meaning of 'epidemiology' is given by the Shorter Oxford Dictionary as 'the study of epidemics' and of an 'epidemic' as a disease prevalent among a people or a community at a special time and produced by some special causes not generally present in the affected locality." Therefore to speak of the epidemiology of coronary thrombosis, or of hare-lip or diabetes or of any non-epidemic disease is a debasement of the currency of thought. It is no use saying that the word is being used in its wider sense. It has no wider sense."

If this objection is valid, there would be an even greater objection to the application of the word "epidemiology" to health. Greenwood, on the other hand, has pointed out that epidemiology suggests, by its derivation "a science of something falling upon the people although it came to mean the study of disease, any disease, as a mass phenomenon." This controversy is, of course, much more than a matter of mere semantics. Many infectious diseases have been virtually abolished as a result of a knowledge of their epidemiology and if, for instance, coronary thrombosis and cancer could be shown to have an epidemiology of their own, the emphasis would, inevitably, shift from cure to prevention. Similarly, if health could be shown to have an epidemiology the emphasis would shift still further in the direction of promotion. However, to support such a thesis it would be necessary to show that health can, in fact, descend on a community perhaps by the application of a system of social hygiene which the late Professor Rene Sand defined as "the integration of medical action with a collective communal discipline." Before this can be done, however, certain epidemiological similarities and differences between health and disease must be considered.

The phenomena of health and disease have this in common: that they are both links in an epidemiological chain of events which may go back days, or months, or years. To take specific instances, we know little of the precursors of influenza or the reasons for the periodic recurrence of epidemics. It is generally held that contributory causes may be meteorological changes, the accumulation of a large reservoir of susceptible persons, the presence of an appropriate strain of virus with, possibly, an exaltation of virulence. It is possible, therefore, that what seems to be the sudden descent of influenza on a population is the result of the interaction of many factors which are in themselves relatively slow moving. Similarly the explosive nature of an outbreak of water-borne typhoid fever may disguise the fact that the water supply may have been sewage polluted

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for years and that the introduction into the community of a carrier provided the specific factor which, itself, depended for its success on a low state of immunity of the individuals concerned, *i.e.*, by the convergence of two (or more) sequences of events. Again, little is known of the nature of carcinogenesis although it is generally believed that, in certain cases, at least, prolonged and chronic irritation is an aetiological factor of importance. These examples could be multiplied indefinitely to show that the time factor is important in the production of disease. This may apply even more forcibly, however, to the descent of health on a community for health may depend not only on the avoidance or the neutralisation of potentially harmful agencies but on the introduction of factors which have a positive promotive value in themselves; so that whereas it may take years for disease processes to manifest themselves in actual disorder, in the case of health the time factor may have to be reckoned in generations.

The reason for this relativity is not difficult to discern and is best understood by a study of the process of recovery from disease. Whether the onset is sudden and dramatic or slow and insidious, the health of the patient may be reduced to a low level in a fairly short time. The process of tissue repair, however, tends to be prolonged and may take months or years to accomplish and may never be quite complete. Mental and psychological rehabilitation may take longer still and the restoration of the individual to a satisfactory level of health may be long delayed. There may be an analogy here with the regeneration of nervous tissue after injury in that "protopathic" or crude and primitive sensation returns first and "epicritic" or more highly differentiated sensation returns much later. This sequence may, possibly, have an evolutionary origin as "epicritic" sensibility may only have developed later in the history of man. In the same way, in surgical anaesthesia disordered consciousness occurs before the loss of the more primitive reflexes and recovery takes place in the reverse order. The descent of health on a civilised community may be governed by similar factors so that in the promotion of health, as in restoration following acute disease, somatic function can generally be improved more easily than psychological function, for it must be appreciated that health is psychosomatic as well as disease. Indeed, the further we progress towards the summit of health the more we become aware of the operation of a law of diminishing returns on the expenditure of energy and resources. To illustrate this point it took, approximately, 50 years to banish smallpox and cholera from our midst and only 10 years virtually to rid the community of diphtheria. It will take longer, although it will, no doubt, ultimately be achieved, to eradicate tuberculosis in the same way. The most difficult task of all, however, is concerned with the wider problems of the "mental health" of the population as manifested by the increase, in recent years, of the psychosomatic diseases which are thought by some to be wrapped up with the complex nature of our society and the frustrations and anxiety of life in the modern world. It is also true that higher levels of health are being sought than ever before; but as health, in its ultimate sense of wholeness, which implies perfection, can seldom if ever be a human attribute, the pursuit of health must always remain a human objective so long as civilised man continues to exist.

As one becomes accustomed to think in terms of the epidemiology of health the more evident it is that the distinction is an arbitrary one and that there is, in fact, but one epidemiology and that this covers both disease and health. Both may be regarded as "the opposite poles of an unbroken line or continuum with at one end death and at the other supreme well-being" (Kennedy). Both, as has already been pointed out, are end points in a chain of causality which includes procatactic (predisposing) and specific or ultimate factors. The proof that epidemiology covers both disease and health is given by the fact that the procatactic causes of disease are, in reverse, also, the procatactic causes of health. For example, good housing

is conducive to health, bad housing to disease. The same principle can be applied to good and bad nutrition, pure and impure water supply, temperate and intemperate habits, personal cleanliness and uncleanness, etc. All these factors, however, favourable and unfavourable, must be recognised as part of a total concatenation of circumstances tending towards health or disease as the case may be, the deciding factor being the presence or absence of the specific or ultimate cause. We know a great deal about the specific causes of disease which include the pathogenic organisms, the toxic agents, the carcinogenic substances and so on. We have already seen that the procatactic causes of disease are in reverse the procatactic causes of health and the same test must be applied to the specific causes; and here it is found that different factors apply. The presence of a bacterial agent may cause disease but its absence cannot possibly be the cause of health—its effect is merely one of "no disease." The presence of a toxic agent may produce poisoning, its absence can only mean that there is "no poisoning"; in both cases the influence is purely negative. A bad environment may, however, become worse still and disease result and a good environment may become not so good because of the presence of a potentially harmful agency.

But what of this intangible thing we call health—does it, also, possess specific causes? As a matter of pure hypothesis let us assume that it does. The presence of a specific factor of health could obviously do no harm and might exert a beneficial effect. A bad environment would be improved by it and a good environment made better still by its presence. Indeed, the absence of it might be a cause of disease and the essentially "positive" nature of this concept is, thus, emphasised. It is true that experience and the results of sociological studies strongly suggest that specific factors of health may be in operation but direct statistical evidence is at present lacking. However, let us consider such evidence as we have. In connection with maternal care, Bowlby has written:—

"Among the most significant developments in psychiatry during the past quarter of a century has been the steady growth of evidence that the quality of parental care which a child receives in his earliest years is of vital importance for his future mental health. . . . What is believed to be essential for mental health is that the infant and young child should experience a warm intimate, and continuous relationship with his mother (or permanent mother-substitute) in which both find satisfaction and enjoyment" and further "that the prolonged deprivation of the young child of maternal care may have grave and far reaching effects on his character and so on the whole of his future life."

Maternal care may, therefore, be a specific factor of health in that its presence is so vital that even the highest standard of purely physical care cannot compensate for its absence. The emotional instability produced by its absence can be regarded, therefore, as a true deficiency disease similar in kind to that caused by the absence of an essential vitamin and indeed it may well be that the latter should be included among the specific factors of health.

As another possible specific cause of health let us consider the case of religious belief. Professor C. G. Jung, in his book "Modern Man in Search of a Soul," has said:—

"It seems that side by side with the decline of religious life, the neuroses grow noticeably more frequent. There are, as yet, no statistics which enable us to prove this increase in actual numbers. But of one thing I am sure, that everywhere the mental state of European man shows an alarming lack of balance. We are living undeniably in a period of great restlessness, nervous tension, confusion and disorientation of outlook." Or again, "Among all my patients in the second half of life . . . there has not been one whose problem in the last resort was not that of finding a religious outlook on life. It is safe to say that every one of them fell ill because he had lost that which the living religions of every age have given to their followers, and none of them has been really healed who did not regain his religious outlook. This, of course, has nothing to do with a particular creed or membership of a church."

Similarly, Richard C. Cabot, of Boston, Massachusetts, in his book "What Men Live By," expressed the view that

soundness of personality and the achievement of health depend on a satisfactory relationship of the individual in regard to work, play, love and worship and, indeed, a good case could be made for regarding these factors as possible specific causes of health. Unfortunately, any notions that we may have on this subject are based on personal experience and the results of social and psychological studies but this does not constitute proof. The specific causes of disease, on the other hand, rest firmly on scientific experiment and, indeed, in the early days of bacteriology Koch's Postulates were formulated to lay down strict criteria as to the conditions required to establish, beyond doubt, that a given organism is the specific cause of a given disease. More recent advances in immunology have still further increased the degree of certainty of the specific causation of many bacterial diseases. The experimental approach is, of course, inappropriate to the study of the causes of health but some method must be found to establish their identity with, if not certainty, at least a high degree of probability.

The first requirement is that we should be able to recognise health and, if possible, to measure it. The second is to analyse the socio-biological background of healthy individuals and, by the application of statistical method, to ascertain the factors which are most significantly associated with health. The technical difficulties are, of course, great, but so were the difficulties which confronted curative medicine before the discovery of bacteria. The latter required the development of new techniques and this applies also to the study of health. The development of biometric and psychometric methods may well do for hygiology what cultural methods have done for bacteriology.

As a step in this direction, the Kent Paediatric Society, in 1948, began an investigation into the Incidence and Causation of Health among 10 to 11-year-old schoolchildren in the Borough of Bexley, Kent, and their report, entitled "A Study in the Epidemiology of Health," was published last autumn. The children in this age group numbered 1,064. The difficulties of such an investigation were obvious. First, it was necessary to try to define "health," a difficult or, some might think, an impossible undertaking. Ultimately, the definition adopted was a modification of that incorporated in the Constitution of the World Health Organization, namely that "health is a state of wholeness or soundness of body, mind and personality and not merely the absence of disease or infirmity." Secondly, it was obvious that in trying to assess the incidence of health physical, intellectual and personality qualities would each have to be considered in the light of this definition.

The basis of the physical assessment was a medical examination by the school doctor who, it may be said, had no knowledge that the results of his examination would be made use of in this way. In order to compare the relative physical state of different children a marking form was devised, based on the School Medical Record Card, which allowed for the deduction of marks for each defect discovered from a possible total of 100. Any child whose deductions were 11 or more, that is, who scored less than 90 marks was excluded from further investigation in that one leg of our "tripod" was defective. The marking form was so designed that a child could lose, say, 11 marks for a serious single defect, *e.g.*, congenital heart disease, or a similar or greater number, cumulatively, as the result of a number of smaller but significant defects for each of which an appropriate deduction was made. A good deal of clinical judgment was necessary in allotting the various deductions, the general principle being that defects having little significance to the ultimate health of the child tended to be overlooked while others which were more serious were taken more strongly into account. A few examples may be given:—

Eleven marks were deducted for organic heart disease, serious pulmonary disease, epilepsy or other serious disease of the central nervous system and for severe orthopaedic defects.

On the other hand, marks ranging from 1 to 3 were deducted for non-constitutional skin diseases, 1 for simple conjunctivitis but 8 for keratitis. Similarly 5 marks were deducted for chronic tonsillitis with glandular enlargement and so on. In every case of uncertainty the child was given the benefit of the doubt and the examiners had agreed a common policy in regard to the standards to be observed.

In addition to the medical examination each child was subjected to mass miniature radiography and hospital and clinic records were available. Of the 1,064 children examined, 208 failed to score the minimum of 90 per cent.

It was, however, still necessary to discover some positive index of physical status and each child with a basic score of 90 to 100 was given an endurance test. Firstly, each child had a hanging bar test in which boys were expected to hang on to a horizontal ladder for 2 minutes, girls for 1½ minutes. This was in the nature of an eliminating test only and each child who was successful was then given an individual dynamometer test by means of a beam apparatus and a measurement was made of the time, in seconds, during which the child could "pull up" half his own bodyweight. Up-grading marks were then awarded to those whose performance, as shown by a standard distribution curve, was above the average and it was possible, on this basis, to score up to 25 additional marks depending on the length of "pulling-up" time. It was surprising how often the small, weedy child showed endurance of a very high degree and it would appear that endurance, in addition to physique may depend, also, on qualities of character, determination and "moral sinews" which may compensate for a lack of physical power. "Pulling-up" time varied greatly, as follows:—

The mean for boys was 205.8 seconds.
The mean for girls was 192.7 seconds.
The maximum for boys was 356 seconds.
The maximum for girls was 378 seconds.
The minimum for boys was 85 seconds.
The minimum for girls was 96 seconds.

Assessment of Intellectual Status

The basis of this was a group intelligence test using the Kent Standard Score and applied by the head teachers. Although an individual test would have been preferable, *e.g.*, on the lines of the Terman-Merrill Revision, this was not possible in view of the number of children involved. However, we consider that the test employed, coupled with the detailed knowledge of the individual child possessed by the teachers, has ensured an accurate assessment of the I.Q. of each child. Many of the children had had a series of tests, *e.g.*, Standard Score, Schonell, Terman-Merrill, etc., and the degree of correlation had been found to be generally satisfactory. No child with an I.Q. of less than 95 (*i.e.*, below the range of normal variability) was for the purposes of the inquiry retained in the ranks of the healthy (the second leg of our "tripod" being unsatisfactory). Here, again, to weight our results up-grading marks for superior intelligence up to a maximum of 25 were awarded on the following lines:—

95—109	110—119	120—129	130 +
0	5	10	25

The basis of this award was a distribution curve for a standardised group of 2,904 children as supplied by Terman and Merrill.

Assessment of Personality Health

Here we found ourselves on less familiar ground but, after careful inquiry, we decided to adopt the Rorschach Inkblot Method as, perhaps, the most objective and practical from our point of view. This method has been used extensively in Child Guidance work and in Industrial Psychology and, in the hands of a psychiatrist with experience in this technique, it is a valuable means of diagnosis and prognosis of personality in health and disease. For those who are unfamiliar with the Rorschach Method the following quotation from the work of Dr. W. Mons is given:—

"The test material consists of 10 standardised inkblots which have been selected from a considerable series of such inkblots. As the subject looks at each card and gives his interpretation of what he sees he is forced to go through a mental and emotional process which shapes his responses. The blots are so vague that they allow for a free play of the imagination. Thousands of different pictures can be seen in each card, though more or less stereotyped interpretations will predominate and be somewhat characteristic of each. But the fact that 'no two people see alike' is strikingly illustrated by results, for, among the records of 2,000, no two are identical. . . . The Rorschach Test is not a mechanical device . . . but a delicate instrument which must be adjusted to the requirements of certain groups of cases. It does not 'measure' anything so much as reveal qualities and give an impression of the total personality as a structure composed of many parts and pieces. . . . By now, some 300 books on the Test have been published apart from countless treatises in periodicals and a paper of its own 'The Rorschach Exchange Research.'"

In the application of these tests to our schoolchildren a group technique was adopted so that about 20 children could be tested at one sitting. Each card was placed prominently before them in turn and they were asked to write down *what* they could see in the inkblots and also *why* they thought they could see those particular things. The children mostly enjoyed this test as a fascinating game and, it will be remembered, they were all children of average or higher intelligence.

The interpretation and marking of a Rorschach record needs special experience and psychiatric training. We were fortunate in that one of our colleagues was a psychiatrist with wide experience of this method and he insisted on a clinical interview with the child whenever his results indicated this to be necessary. This applied both to children with superior as well as with pathological records. He also applied the Rorschach Test, as a check, to a group of children known to be maladjusted. By this means, not only was it possible, we believe, to ascertain the "personality potential" of each child but also to ascertain those children whose personality was (a) defective (b) within the range of normality and (c) of superior level. It should be appreciated that any child found to have a defective or inadequate personality was excluded from the category of Health (defective third leg of our "tripod"). A report on the personality and character of each child tested was obtained from the head teacher of his school.

We were still faced, however, with the problem of devising some method by which up-grading marks could be awarded for the higher levels of personality as they had been awarded for the higher I.Q.s and for superior endurance. A method of scoring was, therefore, devised, which we believe to be new, based on six positive factors of mental health (co-operation, maturity, imagination, reality sense, social sense and balance) and six factors of mental pathology (anxiety, hysteria, obsession, depression, schizoid tendency and organic brain disorder).

With the help of this method it was possible to group the children's personalities, quantitatively, into very superior, superior, average, adequate and inadequate groups. It was also possible to award up-grading marks for superior ranges of personality. The final result of the personality investigation showed that 93 per cent. of the children were of satisfactory personality.

The validity of the results obtained was checked by clinical interviews with a number of children with very superior, average and inadequate Rorschach records. The conclusions drawn from the Rorschach assessments were also compared with the head teachers' reports of the children. The results of these control examinations were satisfactory and showed that the method is useful for personality assessment groups.

To sum up, therefore, we rejected children with a score of less than 90 per cent. for physical status, 95 per cent. for intelligence and those who showed gross pathological features of personality (7 per cent.). We awarded up-grading marks for endurance, for intelligence and for per-

sonality. On theoretical grounds, at least, we could expect the "cream" to rise to the top and the children in this stratum would be those regarded as "healthy" and suitable subjects in whom to try to explore the problem of causation. Whether we were successful or not in identifying the healthy children further experience will show.

Marking Analysis

The following is a brief summary of our marking analysis. It will be remembered that it was possible for a child to score a maximum of 175 marks made up as follows:—

- 100 for basic medical score.
- 25 up-grading for endurance.
- 25 up-grading for I.Q.
- 25 up-grading for personality.

175 Total

In practice, however, no child scored more than 150 marks. A general analysis of the final scores is as follows:—

Marks	Per Cent. of Children
90—95	18.8
96—100	25.8
101—105	17.8
106—110	13.2
111—115	8.5
116—120	7.1
121—125	3.4
126—130	2.7
131—135	1.5
136—140	.5
141—145	.2
146—150	.5
151—175	—

All the children in the investigation were then divided into three groups, Honours, Pass and Fail as follows:—

Honours	— 9.18 per cent.
Pass	— 48.73 per cent.
Fail	— 42.09 per cent.

The honours group were taken to be those children with marks of 116—150. The pass group were children with scores of 90—115 and the fail group consisted of those children who had been rejected on physical, intellectual or personality grounds.

Some Self-criticisms

I would like to mention here some of the self-criticisms which the investigators have made and no doubt there will be many others.

It may be said that the children who scored less than 90 marks were, generally speaking, suffering from some organic defect which would either influence their expectation of life or impose such disability as would prevent the full attainment of their physical potential. The most that can be said of the majority who survived the physical examination is that they were found to be free from detectable physical defect, or to present such minor defects as we had agreed to admit, at the time of the examination and the results are valid at a point in time only. The question whether such conditions were stationary, progressive or retrogressive is, therefore, irrelevant.

It may be useful, here, to examine the causes of initial rejections of the 208 children who scored less than 90 marks for physical status. Of the 42 who were rejected on account of one defect only, the latter was in all cases of a severe organic nature save, in one case, where a boy was rejected on account of chronic urticaria.

The remaining children were rejected on account of "Heart" (8), "Lungs" (10), "Tuberculosis" (2), "Central Nervous System" (1), "Orthopaedic" (8), "Ear, Nose and Throat" (1) and "Miscellaneous Organic Disorders" (11). In the case of children rejected for two defects, a number were excluded for a combination of defects neither of which, taken alone, would have been regarded as grounds for rejection. Fifteen children were in this category and the

most frequent combination was that of defects of eyes and teeth together. Where three or more defects were noted, only nine had a combination of minor defects; all the rest had at least one major defect each. In the case of children with four or five defects, all had at least one major defect each.

It may be agreed that our results are based on the observation of crude defects only and, apart from miniature mass radiography, time did not permit, nor was it considered necessary, to adopt more complicated laboratory techniques in the search for the existence of defect. We are reasonably satisfied that our methods adequately revealed the "experience" of the children up to a given point, namely, the physical examination. These considerations serve to emphasise some of the difficulties of an assessment of health and it is of interest to note that life assurance companies adopt methods similar to our own in assessing the financial risk to themselves of a "life" and there is no evidence that they are venturing into more complicated methods of assessment. No issue arose in this part of the investigation as to the future occupation of the children concerned, whether, for instance, they were going to become members of an Everest expedition or embrace the more sedentary life of a machine minder or a business executive. It cannot be over-emphasised that the results refer to a point in time only and the physical examination tells us how "the body" had stood up to the experiences and hazards of life up to that point; in fact, to a kind of long-term endurance test. This response is undoubtedly a function of healthiness, although the relationship is complicated. An attempt has been made to disentangle the factors involved in the section relating to "causation" of health.

Considerable space has been devoted, in this report, to the assessment of personality through the medium of the Rorschach technique. It is, however, necessary, here, to undertake a brief but critical review of the scope and validity of our method. There can be no doubt that the best way of assessing the personality of the children would have been by means of a full clinical examination of each child and of his parents and this would, preferably, have included a full family and personal history. Further, a visit to the home of each child would have been desirable. All this was, however, impossible owing to the large number of children involved and the complexity of such an approach and resort was had, instead, to the technique which had been described.

Here again, however, an individual Rorschach test for each child would have been the method of choice had time and opportunity not been limited but, under the circumstances, a group Rorschach test had to be carried out. Even so, the results obtained are regarded as valuable.

It should be borne in mind that the technique described of measuring personality with the help of the Rorschach Personality Index is a newly developed one and its value is limited for the following three reasons. First, there is only a limited number of personality features which can be measured at all by any psychometric method. Secondly, the Rorschach test, although revealing a wider range of personality features than any other personality test is, nevertheless, limited in its scope. Thirdly, the new Rorschach method as described is only a move in the direction of a more complete evaluation of personality but is not yet a finally formulated technique. The method is, therefore, experimental but rich in possibilities.

The constellations of "mental health" and "mental pathology" as postulated are in the nature of constructions which may, possibly, have to be improved upon. It may, perhaps, be found necessary to alter the composition of the constellations, to abandon some and to adopt new ones. It may, for instance, be advisable to add constellations of "Initiative," "Tact" and "Cultural Refinement." Another improvement of the method would be the numerical weighting of the factors.

In spite of what has been said, however, and the fact that this is in the nature of a pilot investigation, it is considered that the new numerical Rorschach method has proved to be essentially valid. Further clinical interview

of some of the children tested, undertaken as a control, confirmed the judgment obtained from the numerical tests and the validity of the method is further supported by the results of the Rorschach test as applied to groups of children known to be maladjusted. There was also a correspondence between the Rorschach results and the teachers' assessment of the children's personality.

The "Intermediate Group Rorschach Method," as adopted, together with the development of the "Rorschach Personality Index," makes it possible to measure personality in a relatively short time. The method is of value in procedures of selection and grading and may prove to be useful, not only in schools, but also in factories and in the armed forces.

Aetiology of Health

So much for the incidence of health. We had, now, to find some approach to its aetiology. We proceeded on the assumption that the causes of health might be expected to fall into four main categories namely, Genetic, Social, Economic and Cultural and we evolved, after prolonged discussion, a questionnaire running into 12 pages of type-script in which a large number of possible causes of health were set out. Time will not permit of a lengthy account of the questionnaire but the inclusion of such diverse factors as, to give a few random examples, alcoholism, betting, housing, hobbies, occupation, use of health services, corporal punishment, education, religious observance, etc., is some indication of the wide field that was being explored. It was important that we should not in any way prejudice our results, if any, and much depended on whether we had evolved a worthy instrument in our search for causation.

The questionnaire was applied to

(a) Honours children 116—150 (65 children)

(b) Pass children 90—115 (52 children)

and, as a control, to a random sample of children who failed in the medical examination, the I.Q. test or the personality test (40 children). It was applied by a doctor at a personal interview with both parents, each interview taking approximately 1½ hours. The results of the questionnaire were then transferred to a transcription form and, after coding, were subjected to sorting and cross-correlation on the Powers-Samas machines at the Institute of Social Medicine at Oxford. The child also attended the first part of the interview and received a final medical assessment and certain physical measurements were also taken.

Of the 64 items consolidated in the transcription form from the material in the questionnaire only 12 showed a statistically significant difference between groups and the 12 items themselves varied in regard to their degree of significance. Among the factors found to be associated in some way with health were birth weight of over 8 lb. and antenatal care of the mother including vitamins. Nor was it surprising to find that a family history of epilepsy, whether or not associated with insanity or alcoholism, had an unfavourable relationship with a child's health and development. Adequate sleep, regular defaecation and adequate clothing were also found to have a positive correlation with health. Other correlations related to housing, to corporal punishment and deprivation of privileges. The moderate use of the latter appeared to be compatible with health. It is interesting to find that regular religious observance was more common among the parents of the Honours and Pass groups, although irregular religious attendance was found to be more common among the parents of the Fail group.

Time will not permit me to describe the investigation in greater detail and for a full appreciation of its scope the report itself must be studied. The investigation is, of course, a study in method and, crude as this must inevitably be in many respects, it is, nevertheless, considered to be the first in which a yardstick incorporating objective assessment of physical well-being, intelligence and character has been used to measure the health of a community

and, as such, may have some bearing on the study of health in the future.

One thing emerged quite clearly from this investigation, namely, that, from a practical point of view, health may depend on a vast network of compensations, not only in the physiological sense of between organ and organ but between body, mind and personality resulting in adaptations to the total environment including the whole field of human activity. These adaptations produce a greater or lesser degree of well-being—a condition which falls short of health in the absolute sense of wholeness. As Williamson and Pearce have said "Well-being ensues as a result of effective compensation but since compensation is itself a dysfunction it is accompanied by a subconscious want of ease." It appears, therefore, that for the time being we must be content with health in the sense of balance rather than perfection, adaptation to disease rather than complete immunity, by the full use of the compensatory mechanisms of the totality of the individual and, as Kershaw has said, "to set ourselves contemporary standards and have ambitions for a limited future."

In spite of all this it would be a rash person who would state, categorically, that health can be measured at all. It is said of the late Dr. E. Scott Williamson, the founder and medical director of the Pioneer Health Centre, Peckham, that the last four years of his life led him to the conviction that health can be assessed neither by measurement of quantity nor by statistical method; that it is a question of biological specificity and that living cannot be covered by the methods of the physical sciences. Ryle, however, thought differently, "Health, like disease," he said, "is never a static process. Alike in the individual and in communities it varies quantitatively from day to day and year to year. If we are to secure its upward trend we must know more of its manifestations, its incidence and its aetiology and the study of each of these requires the employment of methods of measurement and comparison."

The evolution of a satisfactory technique for the measurement of health would confer considerable advantages. It might well revolutionise existing practice in regard to individual health assessment in the School Health Service, in industry, in the universities and in the armed services. It would assist greatly in a more realistic assessment of the capabilities of handicapped persons. It would re-emphasise the need in clinical work for the complete rehabilitation of the patient psychologically and mentally as well as physically and it could be used for comparison between groups and as a guide to social policy be it in connection with medical and health administration, with housing and with nutrition. And it might also, as has already been suggested, enable greater attention to be paid to the causative factors of health with a view to their promotion.

In other words the acceptance of the concept of an epidemiology of health would give added meaning and direction to medical organisation and social progress. As Crewe has said:—

"The education of the general public concerning the nature and causes of health and concerning, also, its personal and social value is, undoubtedly, a prerequisite of all successful endeavour by governmental agencies and the medical profession towards the augmentation of the public health."

We have given no indication as yet whether health can, in fact, descend on a population. But if health and disease are, indeed, the reverse and obverse sides of the same coin why is it less likely for health to do so than disease? There would be nothing violent or dramatic about this process but over the years, many years maybe, by progress in methods of promotion, prevention and cure, and in combination with government imbued with philosophical insight, new levels of health might ultimately be achieved than ever before.

May I conclude with one last quotation from Ryle:—"For generations yet we shall doubtless continue to build our costly hospitals and clinics and require our armies of

practitioners and ancillaries, but meanwhile, we must at least embark upon the crusade which will end in the steady reduction of waiting lists and the closure of hospital wards, and which will, eventually, put the physical, mental and moral health of people before their material wealth."

[In the section of this paper dealing with the measurement of health the writer has quoted *in extenso* from the Kent Paediatric Society's "A Study in the Epidemiology of Health." Dr. Landon was the chairman of the Research Sub-committee which conducted this investigation. Copies may be obtained, price 10s. 6d. plus 6d. postage, from the Health Department, 14, Brompton Road, Bexleyheath, Kent.—Editor, *Public Health*].

SOCIETY OF MEDICAL OFFICERS OF HEALTH EAST ANGLIAN BRANCH

President: Dr. Kathleen M. Harding (Dist. M.O.H. and A.C.M.O., East Suffolk).

Hon. Secretary: Dr. G. R. Holtby.

A meeting of the Branch was held at the Scole Inn, Scole, on Saturday, December 4th, 1954, at 3 p.m. The President was in the chair and 19 members were present.

The honorary secretary announced that the death had occurred of a Life Member of the Branch, Dr. G. L. Leggett, O.B.E., former Deputy M.O.H. for Norwich.

Dr. Kathleen M. Harding then gave her presidential address, entitled "The Health of the Countryman," which is printed on other pages of this issue.

A meeting of the Branch was held on Saturday, January 22nd, 1955, at the Scole Inn, Scole, the main part of the time being devoted to a report on the Wart Survey carried out by the Branch in East Anglia.

Incidence of Warts

Dr. P. A. Tyser explained that the Branch had appointed a Research Committee in the summer of 1953. They had discussed several research projects and had decided to investigate the incidence of warts—particularly plantar warts—as a pilot survey on this subject had already been carried out at Ipswich. Information having been obtained as to the number of schools and school-children in the area, advice was sought on the statistical aspects from the statistician to the Department of Human Ecology, Cambridge. He advised that a 10 per cent. sample of the schools would be adequate. The Committee reported back to the Branch and received instructions to proceed with the survey, using a 10 per cent. sample.

The survey was carried out in the six weeks—February 1st to March 12th, 1954. School Nurses examined children for warts at their routine cleanliness inspections, recording their findings on a special form. The Principal School Medical Officers arranged for all children found to have plantar warts to be further examined by a Medical Officer to have the presence of plantar warts confirmed or otherwise.

Mr. T. H. Hollingsworth, research assistant, Department of Human Ecology, Cambridge, then presented a detailed statistical report on the survey. Some of the interesting and important conclusions drawn were that plantar warts are twice as common in girls as in boys, that rural boys enjoy a relative immunity compared to urban boys and both rural and urban girls, and that the incidence of all types of warts is higher in older children.

Dr. Arthur Rook, consulting dermatologist, United Cambridge Hospitals, gave a talk on the facts and folk lore of warts. Their infective nature had now been established and the incubation period worked out, but virtually nothing was known as to the method of transmission, though there were many theories copied from one text-book to another. Dr. Rook discussed the differential diagnosis and described the methods of treatment, the most valuable of which are curettage under novocaine as a local anaesthetic, and the application of carbon dioxide snow.

Votes of thanks were proposed to Mr. Hollingsworth by Dr. R. C. M. Pearson, and to Dr. Rook by Dr. G. R. Holtby.

NORTH WESTERN BRANCH

President: Dr. A. Y. Stocks (M.O.H. Eccles M.B., Divl. M.O. Lancashire).

Hon. Secretary: Dr. J. S. G. Burnett (M.O.H. Preston C.B.).

An ordinary meeting of the Branch was held in Manchester Town Hall, on Friday, December 10th, 1954, when 34 members attended.

Dr. J. L. Burn read a paper entitled "Causes of Failure of Certain Medico-Social Experiments." He described research work which had been undertaken in Salford over the past 12 years and the unexpected results arising from certain of these experiments. He discussed the need for a preliminary appraisal of the position and the vital necessity of knowing in advance the precise questions that need to be asked. His remarks were liberally interspersed with examples of experiments, both major and minor, that had resulted in answers which at the time seemed surprising though in retrospect they were less so.

In discussion Dr. Mountain suggested that the speaker's assessment of success was perhaps unduly high if he regarded a negative result from an experiment as necessarily a failure.

Dr. Hilditch discussed the care of problem families and supported the speaker's views that success should not be assumed too quickly, and Dr. Hailwood referred to the vagaries of the judiciary in differentiating between housing fitness for those over 16 and those under 16.

It is hoped that a précis of Dr. Burn's pertinent and pithy observations will appear in a forthcoming issue of the journal.

An ordinary meeting of the Branch was held in Manchester Town Hall, on Friday, January 14th, 1955, when 20 members attended.

Dr. R. W. Elliott then gave an address on "Health—Lancashire's Inheritance," which it is hoped will be published in a future issue of PUBLIC HEALTH.

A general discussion took place when Dr. Burn referred to the broad factors of improved nutrition, better health education and rising national social standards as main causes in the reduction of infant mortality. Dr. Burnett referred to a remarkable absence of infant deaths in his own area in the second half of 1954—a period associated with persistent rain, lack of sunshine and psychological depression—and suggested that relative absence of infection was the principal factor responsible. He thought that a main difficulty was the inaccuracy in the determination of the real cause of death in young infants and to their different response to infection from that of adults.

Dr. Simpson referred to the need for the investigation of stillbirths and of ill defined causes of death, especially in young infants, and Dr. Hilditch discussed local variations arising from factors such as the influx of Irish labourers.

Dr. Innes, in congratulating the speaker on his fascinating historical survey, compared nostalgically the moral upsurge derived from the air of Buchan, the herrings of Buckie, and the whisky of Speyside with the mundane effect on the Lancashire population of black puddings, eccles cakes and fish and chips and with devastating logic, proved with copious personal references, the advantages of a scientifically planned policy of masterly inactivity over an ill conceived crude attitude of *laissez faire*.

A meeting of the Branch was held on February 11th, 1955, at the School of Hygiene, Liverpool, when 25 members and guests attended.

Dr. A. Thelwall Jones then gave an illustrated talk on "Preventive Medicine in Industry." The speaker referred to the problems of degenerative diseases and to the possibility of their prevention and doubted the efficacy of periodic medical examinations in the detection and control of disease. He spoke of the very special problems occurring in certain industries and of the fact that nevertheless most of the medical problems in industry are not dissimilar to those encountered by the general practitioner in everyday practice.

After a short discussion Dr. F. T. Wood expressed the thanks of the members to Dr. Thelwall Jones for the interesting and novel presentation of a controversial subject that had provoked fresh thought in the minds of those present.

WELSH BRANCH

President: Dr. Amy L. Jagger (A.C.M.O.H. Glamorgan).
Hon. Secretary: Dr. R. T. Bevan (Dep. M.O.H. Glamorgan).

A meeting of the Branch was held at B.M.A. House, 195, Newport Road, Cardiff, on January 21st, 1955, when there were 12 members present and four guests.

The President introduced Professor Duncan of the Welsh National School of Medicine, who chose the following as the subject of his address.

The Unsolved Problems of Obstetrics

Prof. Duncan said that there had been tremendous advances in medicine during the last half century and in particular by the branch of medicine represented by this Society. Emphasis was placed on the careful recording of all medical observations and that there should be an epidemiological approach to obstetrics. It was essential that there should be an integration of reports from all sources—from hospitals, nursing homes, clinics, midwives, etc.

It was stated that probably 10 per cent. of all pregnancies terminated in abortion. The variety of treatments prescribed was probably an indication of the difficulties. It was probable that rest in bed with no specific treatment was as successful as any other method. Modern views doubted whether anatomical derangements of the reproductive organs were often the cause of abortion. It would seem that the placentation of the ovum was of more importance, and especially any abnormalities of the cord such as torsion, vascularisation, etc. Cord lesions have been shown to be far commoner in spontaneous abortions than in therapeutically induced abortions. It is difficult to assess the incidence of true spontaneous abortions. Professor Duncan suggested that histo-chemical investigations of the endometrium, such as alkaline phosphatase, glycogen and vitamin C content may be fruitful fields of research. Deficiency of vitamin E does not seem to play a significant part in the causation of human abortions. It is probable that only a small percentage of abortions are due to congenital abnormalities of the foetus.

Professor Duncan next discussed the problem of toxæmias of pregnancy which could be classified under essential hypertension, pre-eclamptic toxæmia and eclampsia. Essential hypertension was important because of the risk of eclampsia and because it might be recognised for the first time in pregnancy. Pre-eclampsia could well be called a disease of theories since its true aetiology was unknown. The underlying pathogenesis seemed to be arteriolar hypertonicity with its origin in relation to the placenta and uterus, that is, to placental and/or uterine ischaemia. Therefore, placental infarct might be the cause rather than the result of toxæmia. It might be that the ischaemia produces a toxin which causes general arteriolar hypertoxicity—menotoxin is one of the names given to this substance which was present in menstrual blood and the serum of toxæmic women and seemed to be toxic when injected into animals. However, no specific toxin has yet been identified. Injection of radioactive isotopes into the chorionic decidua space revealed that in pre-eclampsia and hypertension the disappearance of the isotopes was delayed beyond the normal. This suggested that in these conditions the blood circulation in the placenta was slowed down, i.e., ischaemia was present. There was some experimental evidence to suggest that whereas in hypertension it was the uterine blood flow which was at fault, in pre-eclampsia it was the placental blood flow which was affected.

In discussing the treatment of toxæmia Professor Duncan pointed out that although various diets had been tried the most important factor in the inhibition of toxæmia seemed to be the fibre content. Hypotensive agents might be useful if hypertension existed. Ion exchange resins might be given to prevent sodium absorption from the gut and therefore prevent the sodium retention occurring in normal pregnancies and accelerated to pre-eclampsia.

Since the chances of a live birth were considerably diminished following the onset of fits Professor Duncan stressed the importance of diagnosing pre-eclampsia in the symptomless phase.

The incidence of toxæmia was shown to be greater in multiple pregnancies where the upset in the haemodynamics of the uterus resulting from the assumption of the upright position tended to be exaggerated. Rest in bed from the 36th week onwards in cases of multiple pregnancy diminished the risk of premature births and toxæmia. Induction of labour might have to be considered in the mother's interest. From the point of view of the survival of the infant consideration must be given to the ill effect of the uterine environment as compared with the ill effects of the external environment on a premature infant.

This led on to one other unsolved problem of obstetrics—the premature onset of labour. Fifty per cent of neo-natal deaths were said to be due to prematurity. Of the causes of premature labour 12 per cent. were due to multiple preg-

(Concluded on page 128).



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WELSH BRANCH

(Continued from page 126).

nancies, 14 per cent. due to maternal disease needing induction, 10 per cent. due to maternal disease causing a spontaneous. The cause in approximately 60 per cent. of cases therefore remained unexplained. It would be easier to find an explanation for these cases if the cause of the onset of normal labour were more fully understood. The causes of premature onset of labour had been variously ascribed as due to differences in premature labour, and 5 per cent. due to foetal abnormalities. The diet, the presence of an anatomical factor such as easily ruptured membranes or perhaps abnormalities in the insertion of the umbilical cord.

Professor Duncan then discussed the problem of post maturity. It was his opinion that only if combined with other factors such as Rhesus antibodies or eclampsia would it give rise to difficulty. It was possible that in a small number of cases only would it give rise to increased foetal loss, and then only because the placenta did not meet its obligations. This resulted in sudden uterine death. The discovery of a test for placental function would materially help in deciding upon the optimum time for induction.

Brief reference was also made to accidental haemorrhage, and causes of breech presentation.

Psychological factors probably played a most important part in abnormalities of pregnancy and labour. It was important that those in domiciliary and hospital practice realise that pregnancy and labour were vital personal experiences to the mother. It should be stressed that pregnancy and labour were generally normal physiological processes. All persons concerned with the administration of the maternity services should get together and formulate a common policy. Professor Duncan looked forward to years of happy co-operation with the Public Health Services.

The intense interest in the address was shown by the number and variety of the questions put to Professor Duncan.

A vote of thanks was moved by Dr. Powell Phillips.

YORKSHIRE BRANCH

President: Dr. C. G. K. Thompson (M.O.H., Wakefield C.B.).

Hon. Secretary: Dr. H. L. Settle (M.O.H., Doncaster C.B.).

A meeting of the Branch was held at 5.30 p.m. on Friday, January 28th, 1955, at the Department of Preventive Medicine and Public Health, 32, Hyde Terrace, Leeds, when Dr. D. Bottomley, a general medical practitioner from Outwood, addressed members on "The General Practitioner and the Medical Officer of Health." The speaker briefly reviewed the National Health Service and its reception by the medical profession both at home and overseas. He then proceeded to enlarge on specific problems which he or his general practitioner colleagues had encountered in their relationships with the many aspects of the work of the Health and School Health Departments. The speaker made a number of suggestions where he felt the services of general medical practitioners could usefully be utilised by the Medical Officer of Health. In summarising the problems Dr. Bottomley pointed out that most of them were due to lack of co-operation with the general practitioner, particularly the failure to transfer information about patients dealt with through the Health Department.

After thanking Dr. Bottomley for his address the President then called upon Dr. A. L. Taylor to reply, Dr. Taylor being the Medical Officer of Health for the area in which the speaker practised. The various cases of complaint described by Dr. Bottomley were then dealt with and in a number of cases he was able to show that the difficulty which had arisen was due to the lack of co-operation through some other body than the Health Department. In conclusion Dr. Taylor agreed wholeheartedly with Dr. Bottomley's plea for more co-operation but pointed out that co-operation requires a two-way traffic. Many members took part in an animated discussion thereby testifying to the interest which Dr. Bottomley's paper had aroused.

Dr. E. C. Benn, Consultant in Infectious Diseases, proposed a hearty vote of thanks to Dr. Bottomley, in the course of which he introduced another outlook on the matter, looking at the problem from a consultant's point of view.

A meeting of the Branch was held at the Town Hall, Wakefield, at 2.30 p.m. on Friday, February 25th, 1955.

After various domestic matters had been discussed the President introduced Mr. T. V. Way, Solicitor, who addressed members on "The Medical Officer of Health in the Witness Box." He described the correct procedure to be adopted by witnesses, both in the preliminaries of preparing evidence and when in Court. This most interesting and stimulating address was followed by many questions from members which the speaker answered very fully and with good humour.

A cordial vote of thanks to the speaker was proposed by Dr. J. Douglas, M.O.H., Bradford, for his interesting address.

BOOK REVIEW

The Health Visitor and Tuberculosis. By Sheena H. Buchanan, S.R.N., S.C.M., H.V. CERT. London; National Association for the Prevention of Tuberculosis, 1955. (Pp. 150. Price 8s. 6d.)

Tuberculosis still remains a serious problem in most areas throughout the country. Although the death rate is falling quite rapidly, notifications still remain disquietingly high. The administrative split in the organisation of the service is aggravating the difficulties of preventive work. In particular, the work and influence of the health visitor in the field are tending to be less effective than in pre-1948 years. It is therefore particularly gratifying and most encouraging to read this recent publication by the N.A.P.T.

In her book Miss Buchanan discusses clearly and vividly the present position with regard to tuberculosis, and how the health visitor can play a key part in its prevention. It is written from her personal experience over many years, and she skilfully records stories of patients and families to illustrate important points with regard to treatment and prevention. She covers the field briefly but most adequately, dealing with, *inter alia*, the cause, spread, and treatment of tuberculosis; the course of work on a case from notification to recovery; the place of the health visitor in a chest clinic; the care of contacts; and the importance of co-operation of all agencies and persons engaged in the field of tuberculosis.

All chapters are excellent but mention should be made of that dealing with "The Health Visitor and the Problem." From her long experience, Miss Buchanan's view is that it is desirable that all nurses doing tuberculosis work should be trained health visitors. She says, "In my opinion the Health Visitors' Certificate is important because the training includes instruction in the techniques of teaching. It is not enough to be knowledgeable in matters of health, it is necessary to be able to impart this knowledge to others. The health visitor learns the importance of environment and social conditions in health and disease. She is trained to think constantly on how disease occurs, how it can be prevented and how infection is spread. She thinks of each person in relation to his family; she is more interested in the welfare of the family group than in individual patients. Not only their physical health but their mental health is her concern. She learns that physical and mental well-being cannot be separated and that if the family have a problem causing anxiety and strain, physical health may break down."

She herself is working as a multi-purpose health visitor and states clearly that she considers this to be the best arrangement. The health visitor is interested in the whole problem of health services in the community she serves, and her duties should allow her to deal with all aspects of family problems. Miss Buchanan certainly shows in her book how successful she has been, knowing her families and all their difficulties and taking tuberculosis, as it were, in her stride. She discusses, too, the vexed question of combining sick nursing and health visitor duty, and is emphatically against such arrangements as the general pattern for the country. In this view she has the support of many in the public health service. As she says, the trend to-day is for health visiting to become increasingly biased on the social side and further removed from sick nursing. Throughout her book she shows clearly the key position the health visitor holds in the prevention of tuberculosis.

The chief responsibility for controlling tuberculosis lies with the community. They must be educated and helped and, although this prevention is slow work, the health visitor should be untiring in her efforts.

The book is so eminently readable, so sensible, and so informative that it should have a wide circulation, not only among workers in the field of tuberculosis but among the general medical profession and the public.



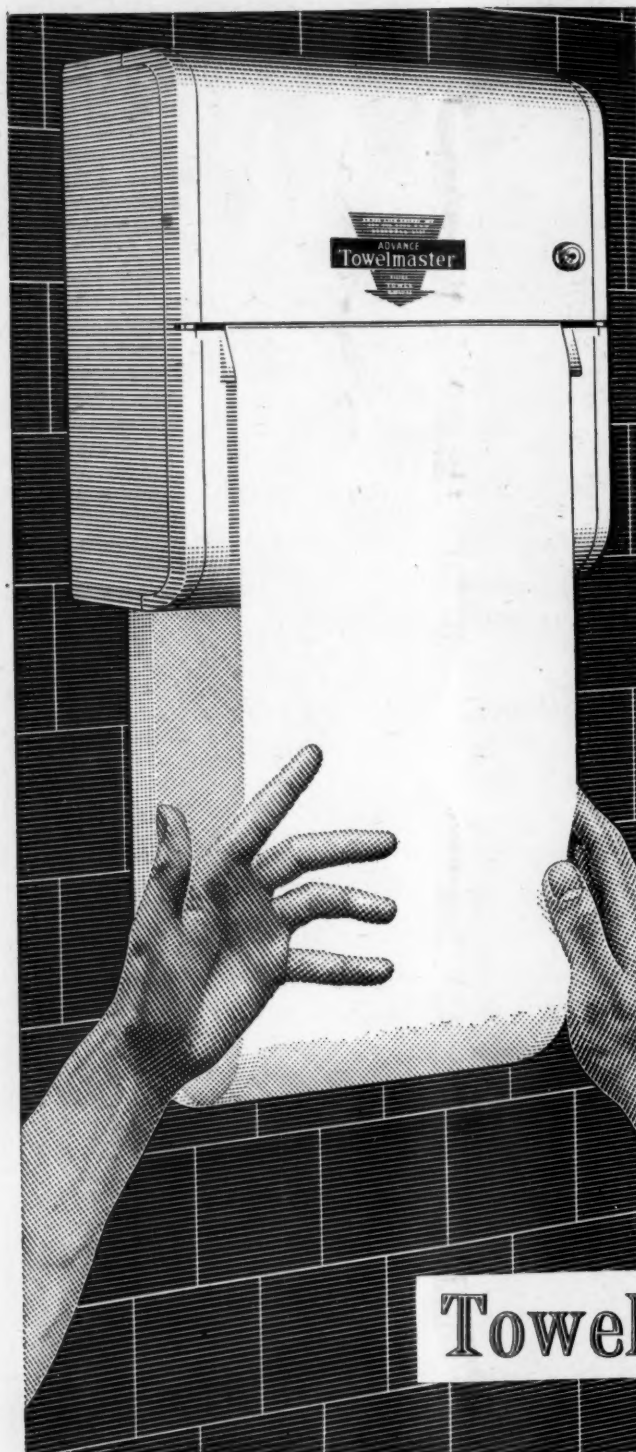
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Candidates for Election at the Ordinary Meeting to be held on Friday,
13th May, 1955.

(The details given in the following list include (1) the Branch to which the member will belong, (2) name and qualifications, (3) address, (4) appointment, and (5) in brackets, the name of proposer, and seconder.

FELLOWS

- H.C. BARNETT, John Dudley Ware, B.D.S., L.D.S., R.C.S., 3 Hill Top Road, Oxford, Ass.School Dental Officer, City of Oxford (J.F.Warin, Mary Fisher)
- N.W. BARNETT, Michael, Shuttleworth, L.R.C.P., L.R.C.S., L.R.F.P.S., 27 Park Rd., Salford 6, Lancs, Part Time Anaesthetist, Manchester Education Dental Services (E.M.Jenkins, C.Metcalf Brown)
- Met. BLOSS, John Francis Escott, M.R.C.S., L.R.C.P., D.P.H., D.P.M.&H., Combe End, Daneshill, Woking, Surrey. Med.Officer, Min.of Health, (A.E.Richmond, W.H. Bradley)
- Yorks. BRAYSHAW, Mary, M.B., Ch.B., 35 Harrison Road, Halifax, School Medical Officer Halifax (G.C.F. Roe, E.J. Ruane)
- Mid. BUCKLEY, Margaret Elizabeth, M.B., B.Ch., Shelton Hall, Shelton, Nr. Shrewsbury, Asst. M.O. Salop C.C., (T.Hall, W. Hall)
- H.C. CATLIN, Robin John Oakley, M.B., B.S., M.R.C.S., L.R.C.P., Service Medical Officer, Army Health, "High Trees" Rectory Park, Sanderstead, (P.J.L. Capon, W. McCutcheon.)
- Sc. CLARK, John, M.B., Ch.B., F.R.F.P.S., D.P.H., 5 Dalkeith Avenue, Glasgow, S.1., M.O., South-West Div. Glasgow, (S.Laidlaw, W.A. Horne)
- H.C. COLEMAN, John Stanley, M.B., B.S., M.R.C.S., L.R.C.P., D.P.H., R.C.P.S.E., Tudor House, Meadow Way, Chigwell, M.O.H., C.B. East Ham (J.Maddison, W.Cormack)
- Yorks. CUSITER, Douglass James, M.B., Ch.B., D.P.H., D.T.M. & H., 42 Wath Wood Rd., Wath upon Dearne, Nr. Rotherham, Yorks, M.O.H. Wath upon Dearne, Swinton & Rawmarsh U.D.C.s. Div. M.O. West Riding C.C. (R.S.Hynd, J.S. Walters)
- Yorks. DORMAN, Christine M., M.B., B.Ch., Mayfield Green Lane, Scunthorpe, (H.B. Clark, F.H. Hall)
- E.Mid. FAIRLAMB, A.H., M.B., B.S., D.P.H., 11 Devonshire Avenue, Allestree, Derby Sen.Asst.M.O., Derbyshire C.C., (J.B.S.Morgan, V.J.Woodward)
- S. FINDLAY, Harry Taylor, M.B., Ch.B., D.P.H., Public Health Laboratory, Winchester, Director, P.H.Lab. Winchester (R.A.Good, G.J.Gordon Wallace)
- Sc. GALL, Rhoda G. M.B., Ch.B., D.P.H., 4 Seafield Road, Aberdeen, Asst.M.O.H. County of Aberdeen (M.M.Sellor, M.E. Harrow)
- Met. HORDERN, B.W., M.B., Ch.B., 1 Morden Court, 19 Morden Road, Blackheath, London, S.E.3, M.O., L.C.C. (F.R.Waldron, E.MacKenzie)
- N.I. JOHNSTON, William, M.B., B.Ch., B.A.O., D.P.H., D.R.C.O.G., Annagarvey, Angher, Co.Tyrone, N.I., Asst.M.O. (R.F.McKeown, J.C.Watson)
- N.I. KILPATRICK, Ann Wilhelmina, M.B., B.Ch., B.A.O., D.P.H., D.C.H., Kilwarlin House, St. James, Hillsborough, Co.Down, N.Ireland., Asst.Div M.O.H. Co.Down Health Authority (E.P. McGrath, S.Hayes)
- H.C. LINDON, Robert Lidstone, M.R.C.S., L.R.C.P., D.P.H., 43 The Avenue, St. Margarets on Thames, Middx. Sen.Asst. M.O. Middx C.C. (A.Anderson, E.N.Christie)
- Sc. MCDONALD, Mary Graham, M.B., Ch.B., D.P.H., 2 Abbotsford Place, Aberdeen. Asst. M.O., Health Dept. Aberdeen (D.Younie, M.Hunter)
- Sc. MACLEOD, Melville Christie, M.B., Ch.B., D.P.H., 98 Essex Drive, Glasgow, W.4. Asst.Div.M.O. (Corporation of Glasgow) (S. Laidlaw, W.A.Horne)
- Met. MAGUIRE, Wilhelmina C., L.M., L.R.C.P., & L.R.C.S., 283 Park West, W.2. School M.O., L.C.C., (F.M. Day, A.J. Shinnie)
- Sc. MAIN, Joan Cameron, M.B., Ch.B., D.P.H., D.A., "Aystree", Albert Road, Westferry, Dundee, Asst. M.O., M. & C.W., Dundee Corporation (A.A.Fulton, S.M. Allardine)
- Sc. MAIR, Alexander, M.D., D.P.H., Dept. of Public Health & Social Medicine, Queen's College, Dundee, Professor of Public Health & Social Medicine, (J.J.A. Reid, I.B.L. Weir)
- E.Mid. MURPHY, Evan Cameron, M.R.C.S., L.R.C.P., 3 Paxton Gardens, Woodham Lane, Nr. Woking, Surrey, Sen.M.O., Ministry of Health (G.Lilico, A.E.Richmond)
- H.C. O'DWYER, Patrick Xavier, M.B., B.Ch., D.P.H., 18 Ernest Road, Hornchurch, Essex. M.O.H. Basildon U.D.C. Deputy M.O.H. Hornchurch U.D., (J.Gorman, J.Maddison)
- N. PARK, Max, M.B., Ch.B., D.P.H., Greenesfield House, Mulgrave Terrace, Gateshead, Asst.M.O.H. & Asst.S.M.O. Gateshead (L.M. Rozner, J.Grant)

SERVICES GROUP (Cont.)

At the kind invitation of the Commandant Colonel M.R. Burke, O.B.E., Keogh Barracks, Ash Vale, Nr. Aldershot, the next meeting of the Services Group will take the form of a visit to the Army School of Health, Mytchett, Ash Vale, Hampshire, on Saturday, 28th May (Whit Saturday). The visit will follow the Annual General Meeting of the Group and it is anticipated that it will conclude at approx. 4.30.p.m. (Members of the METROPOLITAN and HOME COUNTIES branches are cordially invited to join in this visit, and those intending to be present are asked to notify the Administrative Officer not later than 14th May).

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DENTAL GROUP

A Meeting of the Group will be held in the Committee Room, Society of Medical Officers of Health, Tavistock House, W.C.1., on Saturday, May 14th at 2.15.p.m.

AGENDA

1. Minutes of last meeting.
2. Matters Arising.
3. Paper by Dr. R.J. Clausen M.C., M.B., F.F.A., D.A.
(Sen. Anaesthetist, Charing Cross Hospital)
"General Anaesthesia in Children's Dentistry"
4. Report of Chairman of Group Council.
5. Any Other Business.
6. Date of next meeting.

A Preliminary Notice is given of a Cocktail Party to be held on Friday, July 15th, at 6.30.p.m. Details will be circulated later.

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TUBERCULOSIS GROUP

The Annual General Meeting of the Group will be held in the Society's Committee Room, Tavistock House South, London, W.C.1., on Friday 20th May, 1955. at 12 noon.

AGENDA

1. Minutes of the last meeting.
2. Matters arising.
3. Acting Secretary's Report.
4. Election of Officers for the Session 1955/56.
5. Any Other Business.

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MATERNITY AND CHILD WELFARE

A Preliminary Notice is given that the Annual General Meeting of the Group will be held in the Council Room, Church House, Westminster, S.W.1., at 6.30.p.m. on Thursday June 23rd, 1955. Nominations for Officers and members of Committee should be sent to the Secretary of the Group, Dr. Mary T. Paterson, c/o Central Office, by the 3rd June.

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Dinner at Festival Hall - June 23rd at 8.p.m. Arrangements are being made to reserve accommodation for members and guests for dinner on June 23rd, following the A.G.M. The cost will be about 12/6d. per head. Would those who wish to come kindly inform the secretary so that tables may be booked.

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- H.C. POOLE, Geoffrey Henry Gibson, M.B.,B.S.,D.P.H.,D.Obst.,R.C.O.G., 18 Rosslyn Avenue, Chingford, E.4, A.C.M.O. Walthamstow Health Area (A.T. W.Powell, M.Watkins)
- Mid. PRESTOE, Carrie Hooper, 9 Greenside Road, Erdington, Birmingham 24, M.B.,Ch.B., M.R.C.S.,L.R.C.P., Asst. M.O. M & C.W., Birmingham (J.M.Mackintosh B. Hatherley)
- Yorks. ROBERTSON, James Stewart, M.B.,Ch.B.,M.R.C.S.,L.R.C.P., 65 Manor Drive, Acomb, York, School M.O., (F.R.Shevlin,C.B.Crane)
- Met. SILLETT, Rachel, Eileen, Wellesley, M.B.,Ch.B.,D.P.H., St.Barnabas Inst., Townley Road, S.E.22., Part Time M.O.(M.&C.W.) L.C.C. Div.7., Part-Time lecturer in Public Health, London School of Hygiene, and Royal Free School of Medicine (F.M.Day, A.J. Shinnie).
- N.W. SLOAN, Betty Joan, M.B.,Ch.B., 102.Harboro Road, Sale, Cheshire, Part-time A.M.O. Warwicks. (J.H.Briscoe-Smith, GwendolenK.G. Coote)
- H.C. TAYLOR, Elsie Gladys , M.B.,B.Ch, D.C.H, D.R.C.O.G., Tilgate View, Halthouse Road, Crawley, Sussex. Asst. S.M.O., West Sussex C.C. (K.N.Mawson, G.H. Pringle)
- Welsh WEBSTER, Helena Jane, B.Sc.,M.R.C.S.,L.R.C.P.,M.B.,B.Ch.,D.P.H., 15 St. Marys Road, Whitechurch, Sen. Medical Officer, Cardiff City Council. (G.Evans, W.P. Phillips)
- Met. WINNER, Albertine Louise, M.D., M.R.C.P., 68 Tavistock Court, Tavistock Square, W.C.1., Sen.M.O. Ministry of Health (M.G.Gorrie,G.Lilico)
- Sc. WILSON,Thomas Scott,M.D.,D.P.H.,D.I.H.,64 Carmyle Avenue,Tollcross, Glasgow,E.2., M.O.Central Div. Health Dept.,Glasgow (S.Laidlaw,N.I.Wattie)
- ASSOCIATE
- H.C. BYWATERS, Olive Nancy, M.B., B.S., Dr. Barnardo's Homes, Barkingside, Essex, M.O. Dr. Barnardo's Homes (M.Gilchrist, J.E.Marshall)

SERVICES GROUP (Cont.)

At the kind invitation of the Commandant Colonel M.R. Burke, O.B.E., Keogh Barracks, Ash Vale, Nr. Aldershot, the next meeting of the Services Group will take the form of a visit to the Army School of Health, Mytchett, Ash Vale, Hampshire, on Saturday, 28th May (Whit Saturday). The visit will follow the Annual General Meeting of the Group and it is anticipated that it will conclude at approx. 4.30.p.m. (Members of the METROPOLITAN and HOME COUNTIES branches are cordially invited to join in this visit, and those intending to be present are asked to notify the Administrative Officer not later than 14th May).

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DENTAL GROUP

A Meeting of the Group will be held in the Committee Room, Society of Medical Officers of Health, Tavistock House, W.C.1., on Saturday, May 14th at 2.15.p.m.

AGENDA

1. Minutes of last meeting.
2. Matters Arising.
3. Paper by Dr. R.J. Clausen M.C., M.B., F.F.A., D.A.
(Sen. Anaesthetist, Charing Cross Hospital)
"General Anaesthesia in Children's Dentistry"
4. Report of Chairman of Group Council.
5. Any Other Business.
6. Date of next meeting.

A Preliminary Notice is given of a Cocktail Party to be held on Friday, July 15th, at 6.30.p.m. Details will be circulated later.

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METROPOLITAN BRANCH

The Annual Meeting of the Metropolitan Branch will be held in Committee Room "C", B.M.A. House, Tavistock House, W.C.1. on Friday, 13th May, 1955, at 5.30.p.m.

AGENDA

1. Minutes of Meeting held on 11th March, 1955.
2. Apologies for Absence.
3. (a) Annual report on the activities of the Branch.
(b) Annual Report of the Borough Medical Officers Committee.
4. Annual Report of the Honorary Treasurer.
5. Election of Officers for the year 1955/56.
6. Address on
"ARMY HEALTH ORGANISATION & PROBLEMS"
P.J.L. Capon, Esq., Professor of Army Health,
Colonel, R.A.M.C.
7. Any Other Business.

The Royal Society of Medicine (Section of Epidemiology and Preventive Medicine) has extended an invitation to members of the METROPOLITAN BRANCH to take part in the Centenary celebration of the work of Dr. Snow on cholera, on the 17th May (Details have already been circulated to members of the Branch).

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SERVICES GROUP

The Annual General Meeting of the Group will be held in the Officers' Mess, at the Army School of Health, Keogh Barracks, Ash Vale, Hampshire, at 10.55.a.m. on Saturday, 28th May.

AGENDA

1. Apologies for Absence.
2. Minutes of Last Meeting.
3. Election of Officers and Committee for 1955/56.
4. Any Other Business.

Cont. overleaf.